ROBERT KIRALY, SOFTWARE DEVELOPER

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BACKGROUND

I'm skilled in more than one area. My experience spans more than one decade. If we're in agreement that these are positives, let's talk.

I was the sole maintainer at one point for software that counted half of the U.S. Vote. I handled the initial design of one of Adobe's network protocols. I've worked with most UNIX platforms, including BSD, Solaris, and Linux. I've created my own Linux distro. I've customized standard distros as well.

I was High Honors and Honors in Math and Computer Science at U.C. Berkeley. I leverage Open Source to reduce costs. I'm good at analysis of problems. My documentation is top-notch. I've created frameworks from scratch, untangled legacy codebases, done B2B support, taught ages from 8 to 80, vetted documents for CEOs and Board members, and served in other roles.

SKILLS

Foundation skills: 40 years C, 40 years UNIX, 40 years shell, 30 years Agile, 25 years Perl, 30 years technical writing, 22 years Linux, 20 years basic webdev.

Additional skills: Bash, Build, B2B support, C, DBA, Debian, DevOps, Digital Forensics, DKIM, ETL, FOSS, GIMP, HTML, Investment Portfolio, JavaScript, jQuery, Legacy code, Linux, Lua, MariaDB, MySQL, Open Source, PaaS, Perl, PHP5, Point of Sale (POS), Python, Recruiting, Regex, SaaS, Shell, SQL Server, Ubuntu, UNIX, Tcl/Tk, UNIX, Teaching, Tech Support, VPS, Writing, XML.

TYPICAL PROJECTS

Fighter Jet software: 2004 to 2009. Google for Northrop Grumman MILES Project. I did an SQL database appliance, a hardware simulator, a GUI, and other components.

Hack the USPTO: 2010. A startup asked me to get past USPTO anti-download measures. Note: This was legal. I used 50 Tors and a semi-autonomous agent written in Perl.

U.S. Vote: 1981. I was the sole software support engineer for about 1/3 of the U.S. Vote. Google for Computer Election Systems BRC. I reported to P.J. Lyon.

Restructure processes: 2014. I analyzed software development processes for a $100M pharmaceutical firm and produced a 15-page set of recommendations for restructuring within 96 hours after my arrival.

Point of Sale reports: 2016. I created an MS-SQL reports framework from scratch for a restaurant chain using Strawberry Perl and Git for Windows. I rewrote the firm's data loader as a side task.

Linux distro: 1995 to 2017. My own project. I've developed a Linux distro of medium complexity from scratch. This has meant, essentially, understanding, patching, building, and integrating 2,000 software components.

UK-NCIS anti-terrorism: 2001. This was a proof of concept license-plate database.

DTIC microfilm to microfiche: 1982. In the 1980s, the U.S. government had accumulated a lot of microfilm that needed to be converted to a new format, microfiche. The DTIC decided to build a device for the purpose. I was the software developer. We spent a year on the project. This was about 450 pages of dense assembly code. In the decade that followed, no bugs showed up.

UK-NCIS anti-terrorism: 2001. This was a proof of concept license-plate database.

Recruiting: 2011. I spent part of 2011 as a recruiter for a startup in the power grid sector.

Rockwell rockets: 1995. Rockwell was involved with rockets and used the MIL-STD-1750A processor to handle some of the related operations. I was the software developer for the C compiler that Rockwell used at the time.

EDUCATION

I have a double bachelors degree in Mathematics and Computer Science from U.C. Berkeley. The Math degree is High Honors and the C.S. degree is Honors. I was a National Merit Scholar as well.

CAREER HISTORY

If you'd like a company list, it follows in chronological, not reverse chronological, order. I'll present this part as a story. The story illustrates the range of what I'm able to handle and how I deal with different types of situations.

K&S Co. Berkeley, California Sep 1978 to May 1981

One-line summary: I rewrote a business management system for a property management firm.

My first ongoing computing job was at a property management firm named K&S Co. I was a student at Berkeley at the time.

I reported to the head of the firm, Al Satake. He was the "S" in K&S Co. Al had a copy of the source code for a business management system written in BASIC. Over a 2.5-year period, I cleaned up the code and added new reports and features.

Skills: Business Process Management, Accounting, property management.

IPT Corporation Palo Alto, California May 1981 to Jan 1999

One-line summary: I completed hundreds of successful tasks and projects at IPT.

I spent 18 years at an outsourcing firm in Silicon Valley named IPT. This job was my primary career.

IPT had standard products, including the official compilers for some Data General and Rockwell systems, assemblers, debuggers, source-code analyzers, and a word processor. I wrote, worked on, or managed many of the products.

The company also did custom projects for firms or agencies such as Adobe, Boeing, Data General, Disney, Motorola, Rockwell, and the Defense Technical Information Center.

On the custom projects side, I was the sole software support engineer for the system that counted half of the U.S. vote one year. I was also the sole software developer for the device that the U.S. Government used for a decade to convert its stock of microfilm into microfiche. Additionally, I did the initial design for one of Adobe's print protocols.

Other projects included GUI layers for CLI tools, embedded operating systems, a custom Linux distro, a Photoshop ECG plugin, email client software, multimedia transcoders, anti-virus software, custom servers, electronic circuit netlist tools, refactoring of legacy code, and PC BIOS work.

IPT's initials stood for different things at different times.

The CEO, Steve Carr, was an expert salesman, but he wasn't good at predicting trends in tech. Most importantly, he figured that both the IBM PC and the Internet would be fads.

So, the firm went bankrupt three times. The first two times, Steve kept the initials "IPT", but changed what they were supposed to be for. This meant that the company could continue using the same stationery, phone listings, etc.

Skills: Most areas of software development.

Cleanscape Software Palo Alto, California Jan 1999 to Sep 2003

One-line summary: I handled all aspects of the technical side of a startup during its last two years.

I was the sole engineer employed by a Silicon Valley dot-com named Cleanscape Software for four years, excluding Board members and a few contractors who were brought in from Russia.

I accomplished a lot at Cleanscape Software. From 2001 to 2003, I was the technical side of the company.

My responsibilities included bug fixes, manuals, mock-ups for investors, GUI and Internet layers for old products, design of new products, databases, IT, web and FTP sites (both servers and content), support calls, sales calls, marketing, and management of contractors.

My work-week ranged up to 120 hours. Additionally, in 2001, when the dot-com was located in a Silicon Valley garage, I slept on the concrete floor in the garage, just a few hours a day, so that I could focus on getting a project done.

That part proved to be pointless. The dot-com didn't have a business model and wasn't destined to survive.

Cleanscape Software was initially a fork of IPT, a company where I'd worked for 18 years.

When IPT failed, Monty Swaiss, a manager at IPT, put together a deal with a couple of partners, Ted Batha from Delfin Systems and Tim Moriarty from Venice Resources.

Monty, Ted, and Tim acquired some of IPT's products and tried to assemble new business models based on them.

So, my role at Cleanscape, initially, was similar to what I'd done at IPT. I handled development, bug fixes, support, and documentation.

Company investors included friends, relatives, and, literally, one dentist of Board members. So, the Board members knew the investors on a personal basis. There was significant pressure on the Board to make things happen.

When the dot-com boom hit its peak around the year 2000, Cleanscape Software abandoned the idea of traditional products and looked for a way to persuade institutional investors to hand over a billion dollars. At the time, this was the dream of every small outfit.

The main thing that the company did was to hire Michael Aivazis, a "name" in the Python community, to persuade investors that something was going on.

Michael Aivazis told me that he'd been promised a million dollars just for letting his name be used. Naturally, the company didn't give him the million dollars. He was displeased by this.

As a side note, Michael told me that he'd had a tangential role in the development of the Python language. Supposedly he'd gone over to Guido van Rossum's house with tuna fish sandwiches and talked Python with van Rossum over tuna.

I asked van Rossum, years later, if the story was true or not. van Rossum said that it might be true, but he didn't remember.

The dot-com approach didn't work out. At the end of 2000, Cleanscape Software ran out of money. Essentially everybody was fired, about 20 people, except for me and a junior marketing person named Arthur Chan aka Kwok Nin Chan.

Ted Batha stayed on as unpaid CEO. There was also a salesperson named Chris Niggeler.

The Board didn't want to admit that the company was dead. So, I kept things going for them for two more years. It was mostly me and Arthur. The three founders, Monty, Ted, and Tim, were occupied with other matters and largely disappeared.

The company stopped paying Arthur, but it didn't fire him, because this would have allowed him to file to collect back wages and unemployment insurance that the company hadn't paid for.

I did my job. I spent up to 40 hours at a time, literally, at my desk.

In the end, the Board replaced the CEO, Ted Batha, with the salesperson, Chris Niggeler, who told them that, as a salesperson, he could make deals happen.

Chris Niggeler promptly embezzled company funds. I left shortly after that. The company was deceased in all but name subsequently.

I did my part to support the team, all the way through, and to make things work.

Skills: Most areas of software development, management, marketing, basically everything that went into running the technical and IT side of a dot-com.

Northrop Grumman San Diego, California Feb 2004 to Feb 2009

One-line summary: Great project. Range of tasks. The context was fighter jets. Nice change of pace.

Ted Batha, the CEO I'd worked with at Cleanscape, ended up at Northrop Grumman and hired me for the MILES project there.

MILES was about fighter jets. The codebase included both new modules and modified Open Source frameworks.

My part included a Perl server, written from scratch, that collected binary data from upstream devices, stored data using SQL, and relayed it to client software as XML over HTTP. Client software included standard web browsers and a Java GUI that I created.

The system generated its own documentation and outputted the documentation in HTML, PDF, and text format. The project included a hardware simulator written in Perl. MySQL, PostgreSQL, and SQLite3 were all supported as database back-ends.

My primary contact stated that he was “extremely impressed by the quantity and quality of your work”.

Skills: C, Perl, shell, Java, MySQL, PostgreSQL, XML.

Geo-Temp Newark, California Aug 2003 – Mar 2016

One-line summary: Geo-Temp was a small physics-based startup.

I was associated on a part-time basis with a startup named Geo-Temp from 2003 to 2016. This was the venture named “Geo-Temp” that was run by Dr. Nancy Del Grande of Lawrence Livermore and not the staffing agency named “Geotemps”.

Geo-Temp sought to market services based on dual-band infrared data as interpreted using the principles of thermal inertia. Applications included the detection of underground tunnels, pockets of natural resources, and flaws in bridge decks.

My role was to vet abstracts for technical journals, to edit proposals and reports, to work with spreadsheets, and to assist with IT.

Technically, I still assist Geo-Temp with IT, but the company's current focus is on international projects and I don't play a direct role in those.

Skills: Technical writing, MS-Excel, mathematics, GIMP, Octave, Windows IT.

Patent Savant Mountain View, California Jan 2010 to May 2010

One-line summary: I was asked to get past USPTO barriers and retrieve data.

In 2010, I was asked to serve as architect for a startup named Patent Savant. It was the type of Silicon Valley deal where five principals meet at a coffee shop, hash out the details, and communicate by phone and email afterward.

Patent Savant planned to sell services to attorneys related to the analysis of U.S. Patent Office data. The key concept was that the company was going to calculate odds related to reexaminations based on a probabilistic model.

At the time, the USPTO was trying to monetize patent data. This wasn’t completely legal, but they set up technical barriers anyway. My job was to get through the barriers.

I used dozens of Tor processes running in parallel to bypass IP-address restrictions and a semi-autonomous Perl agent to persuade the USPTO that human interactions as opposed to automated downloads were taking place. The Perl agent downloaded USPTO web pages, extracted gigabytes of data, and moved it into a MySQL database.

I worked on this project for a few months. Then I learned that the founder, Alan Meyer, didn't have any funding. Alan Meyer had told the principal investor, an attorney named John Nicholas Gross, that everybody else would work for free.

Alan told everybody else that John would write checks "any day now". He managed to keep this up for months.

John Nicholas Gross, the investor, told me that Alan Meyer had told him I'd write code and turn over the rights in exchange for being considered for a job. There was to be no payment for the code, no share of the company, not even a guaranteed job. Months of work just to be considered for employment. I don't know who was more naive; the investor or me.

When I confronted Alan Meyer, his explanation was that he hadn't had have any choice but to misrepresent things.. He said that he was a soldier who was about to be sent to Afghanistan. I gather that he needed money to get out of the service.

It was a typical startup story, if there is such a thing.

Skills: ETL, HTTP, MySQL, Perl, shell, XML

Unnamed startup Cupertino, California June 2011 to Sep 2011

One-line summary: I'm not a typical recruiter.

In mid-2011, I was asked to be a recruiter for the head of a failed power-grid company in Silicon Valley. The head wanted to launch a new venture. He had me recruit both for the new venture and as a separate business to raise cash.

I was considered unusual because I actually followed up with candidates who didn't get jobs and explained things to them. My employer said that this was unusual, but he didn't object.

I stayed in contact with one candidate until he passed away from a stroke. Another candidate felt that I'd helped him to learn English. He came to visit me and we still hang out at times. For those who read my weblog, the second person is std::vector, the Belarus security analyst.

Skills: Recruiting.

Sleek Media Ayrshire, Scotland July 2012

One-line summary: See the client's review of my work one at http://elance.oldcoder.org/

This was a full-stack webdev project which was unusual in that it was based on a Perl framework. Perl is fine for webdev, but it fell out of favor in the 2000s. The company had had the framework developed by another firm and needed bug fixes made. I proved to be proficient at this.

Quote from my Elance review:

"OldCoder was meticulous in his communication. His knowledge of the field was second to none. He was a pleasure to work with and his calm, methodical approach served to provide focus in a time of stress and tight deadlines."

Skills: Linux, Perl, shell, Web development.

RapidBlue **Helsinki, Finland** **Dec 2012**

One-line summary: Short MySQL project.

This was a short research project related to MySQL and scalability. There are details related to this project online at:
http://oldcoder.org/general/websystems/sharding/

Skills: Linux, MySQL.

NoHold **Milpitas, California** **Mar 2013 to Dec 2013**

One-line summary: Software development, technical writing, and business development.

noHold was a startup which had one core product, a virtual agent that was tailored to suit the needs of different corporate customers. My tasks were as follows:

* Reproduce missing source code
* Documentation for potential buyers of the company
* A responsive web-app interface to the virtual-agent API used by the core product
* Bug fixes for a migration from 32-bit Windows to 64-bit Windows
* Salesforce support for the core product
* Business development

The company was headed by Diego Ventura, who I'd worked with at IPT in the 1990s. Connections are often how things work in tech.

For people who read my weblog, Diego was the Knight at IPT. Interestingly enough, at about the time that I joined noHold, he was knighted in real life.

The work that I was most proud of at noHold included documentation, bug fixes, and business development:

1) It turned out that the company had never documented the principles of operation of its codebase at a technical level. It didn't even have current build instructions. Knowledge was largely tribal. If either of two key people left, the company was going to shut down.

Diego was hoping to sell noHold for tens of millions of dollars. Nobody was going to touch the firm, though. Due diligence would have revealed that there were no formal processes that weren't stored largely in people's heads.

So, I interviewed people at the firm and produced 100s of pages of organized material. In the end, oddly, I may have been the only person at the company who fully understood the company's primary systems, the different pieces, at a high level.

2) During my tenure, noHold sought to upgrade its codebase to a new release of Visual C++. I hadn't used VC++ in a decade, but I was able to isolate and identify an obscure issue that had stumped people with far more VC++ experience.

3) The most important thing that I did at noHold was to identify a billion-dollar market that was a strong match for the company's product and to provide Diego with contact information and introductions. But he never took it further than lunch with one of the people involved.

There were negatives to working at noHold. I handled them to the extent possible.

One negative was that noHold was a startup in stasis.

Diego's core product was a virtual agent that had been developed circa 2000. It was novel at the time and successful enough to keep a small company afloat.

But noHold was overconfident and assumed that it was destined to own the virtual agent market. The core product was taken for granted. Ultimately, the code became dusty and unmaintainable even by developers who'd worked with it for years.

Even the company's public-facing servers were allowed to fall into stasis and become irreproducible. It was possible to patch them, but by the time that I joined noHold, it was unlikely that everything could ever be set up again from scratch.

In short, the company neither failed nor moved forward and built on what it had. Over time, competitors arose and started to eat the company's lunch.

Diego told me that he hoped I'd be an "agent of change" at noHold. But the company had kingdom issues that I wasn't able to get past.

Cynthia Tuttle, one of the two existing developers at noHold, shouted at me shortly after I arrived, "What is your role?"

I asked the company's VP of Engineering, Dario De Santis, what this was about. He told me that Cynthia was mentally ill. However, she couldn't be fired because she was one of only two people who knew where noHold's core code was and understood what to do with it.

One of my tasks was to write some Salesforce code for noHold's core product. Diego figured that this would be easy because his other developer, Yubing Peng, had written some initial Salesforce code. The idea was that I'd find that code and extend it.

But Yubing wouldn't tell us where the code was. And she, too, couldn't be pressured or threatened with firing because she was one of only two people who knew where the core code was and understood what to do with it.

After six months, Yubing admitted that she didn't actually know where the Salesforce code was. She said that she'd left it on a cloud server somewhere years before.

I'm patient, when possible. I did what I could at noHold. I only literally banged my head on the wall hard enough to bruise it once.

During the time that I was at noHold, the only technical advance I observed was that the company managed to migrate some of the DLLs from 32 bits to 64 bits. During this period, competitors were rolling out new products with flashy ad campaigns.

Daniel DelGreco, the company's long-time head salesperson, expressed concerns about the advertising issue. He left to go to work for Oracle a few months later. Dario, the VP of Engineering, left as well. Diego apparently fired the other salespeople after that and placed QA on half-time.

But, as of 2017, the company is still in business and has a new salesperson. Diego isn't somebody who gives up easily.

I myself transitioned from employee to contractor in the first quarter of 2014 and moved to the Emeryville startup discussed below after that.

Skills: MS-SQL, Natural Language Processing, technical writing, Visual C++, Visual Studio, jQuery, business development.

Unnamed startup Emeryville, California May 2014 to Sep 2014

One-line summary: Interesting but disorganized and unfunded startup. I should have taken the job in China.

In Spring 2014, a startupers group that I'd founded engineered a minor stunt. They got me the #1 news slot at Hacker News for a day. At the time, this was difficult.

The publicity led to two job offers. One was in China and one was in Emeryville, California. I took the job in Emeryville.

The job was with a startup that had a Salesforce-related business model. My tasks were as follows:

* Ruby on Rails GUI work
* Back-end Salesforce API code
* Teaching web development to a junior developer
* Fixing problems with git branches
* Refactoring legacy code
* Rehosting the venture from Heroku to AWS EC2

The AWS EC2 work was the most interesting task.

Heroku was a dead-end, but developers liked it because there was a "push to play feature". If you did a git push, Heroku deployed automatically. So, I created a new AWS EC2 instance, moved all of the startup's code there, and wrote scripts to implement a miniature Heroku.

I had limited experience with Heroku, but I finished everything in one day. I think that this was on my birthday in 2014.

As is often the case with small startups, the founder in this case didn't have any money. He was paying for everything out of pocket. The idea was that a presentation in September 2014 was going to lead to investors handing over large amounts of cash.

This sort of thing rarely goes well.

In this case, during a company meeting by phone, something funny happened. Two of the engineers thought that they were on a private line, but the entire group could hear them. The engineers talked about the fact that the startup's codebase was structured incorrectly and would need to be redone.

The startup fell apart after that. But it was an interesting Summer.

Skills: AWS EC2, Perl, shell, Ruby, Salesforce, teaching, technical writing, basic webdev.

World Health Industries Jackson, Mississippi Aug 2014

One-line summary: This job was a movie-worthy adventure. Indiana Jones and the Development Processes.

In August 2014, I was asked to conduct an analysis for the Board of Directors of World Health Industries that the Board viewed as high-priority. There were concerns related to internal stresses and questions related to the company's source code.

I got the job through a likable con man named Tarzan Sharif.

Tarzan was friends with the son, Tyler Barrett, of the one of the heads of WHI, Chad Barrett. A problem had come up at WHI. Tyler talked to Tarzan about it. Tarzan called a friend of his. And Tarzan's friend kicked the job to me.

This is how it works, really, in tech.

For people who read my weblog, Tarzan's friend was Bedivere. Bedivere didn't trust Tarzan and thought that the job sounded flaky. So he asked me if I wanted to do it instead of him.

The idea was that I was supposed to fly to Mississippi, immediately, for an undisclosed job. No discussion of requirements or the role. Just go to the airport, right away.

I said, "Sure, why not".

I met the heads of WHI and considered them to be sincere people. The situation was about sorting things out. This is something that I'm able to do.

I interviewed managers at different levels, the company's lead developer, and IT staff. The tricky part was talking to the firm's lead developer, Fei, who had a reputation for being temperamental. WHI staff told me that he'd smashed his fist though a monitor once.

After the interviews, I analyzed the company's IT and software development processes. Then I offered management recommendations related to a reorganization.

The deliverable was a 15-page report that was presented to the Board only 96 hours after my arrival. I wrote it in a single 24-hour period immediately before the presentation. The document was reviewed closely by the Board and was well-received.

WHI didn't implement my recommendations. Subsequently, the company split into pieces. But I did what was possible and will always remember the trip.

Skills: Linux, WordPress, IT, Project Management, webdev, technical writing.

ATXware Austin, Texas Oct 2014 to Mar 2015

One-line summary: Minor startup tasks.

After my August 2014 presentation to World Health Industries (WHI), WHI decided to set up a startup in Austin, Texas. The startup was named ATXware.

1) I assisted with the purchase of colocated servers and setup in a secure data center
2) I researched options related to HIPAA compliance and offered related recommendations
3) I produced a budget for the startup and proposed a roadmap related to the company's goals

Tarzan Sharif, the con man who'd gotten me the job with WHI, persuaded WHI to put the startup in a luxury residence instead of an office. Tarzan then moved in and lived there for a couple of years. I was supposed to live there with him, but I declined.

Skills: HIPAA, Linux, IT, project management, technical writing.

Luckys Market Niwot, California Nov 2014 to Oct 2015

One-line summary: High pressure, disorganized firm, nice people.

Luckys was a small supermarket chain. This was a startup in the supermarket sector and not the better-known Lucky Supermarkets.

I was employed by the corporate office, during a transitional period, as the chain's sole software developer. These were my projects:

1) I created a web framework based on PHP5, MySQL, Bootstrap, and jQuery. The framework allowed managers to view and edit POS data remotely through a web interface.

2) I analyzed the chain's processes and reimplemented five of them outside the POS system: Promotions, Cost Changes, Price Changes, New Items, and Scanbacks (vendor-to-chain rebates). My software reduced the workload of the chain's data-entry team by 90%.

3) I created a new pricing analysis tool. This tool reported the effects of vendor cost changes based on product movement numbers and added recommendations for retail prices based on price-point rules and profit margin goals.

If you connect with me at LinkedIn, you'll see a recommendation for the Luckys work there. This is a quote from the recommendation:

“The one piece I was missing was a developer that could handle anything from programming and web support to SQL development. Bob was able to do it all. Bob always looked at the big picture, figured out the root causes, and was always loyal to the business, to his team, and to me.”

Skills: MySQL, MS-SQL, AWS EC2, MS-Azure, MS-Excel, Point of Sale, Perl, shell, PHP5, HTML, ODBC.

Mr. PHP — Hackham, Australia — Nov 2015 to Mar 2016

One-line summary: PHP webdev.

I did a few webdev projects for Mr. PHP in South Australia. Tasks included an XML import feature for OpenCart, enhancements to a CakePHP-based system for auto repair shops, and content fixes and updates for a medical website.

As part of this, I contributed to upstream OpenCart.

Skills: CakePHP, JavaScript, MySQL, OpenCart, PHP5, Shell, XML.

Firehouse Subs — Jacksonville, Florida — Jun 2016 to Dec 2016

One-line summary: Useful exposure to new areas, nice people.

I've been associated on a part-time basis with a national chain named Firehouse Subs. I've done primarily SQL Server work for the company. In particular, I've restructured the chain's transactions database and produced analyses of different types.

The database restructuring included deduping a fair amount of data (approx. one-half billion rows) using a Perl DBI tool of my own design. I also did some server-side optimizations.

Skills: Perl under Windows, Point of Sale, SQL Server, automated reports.

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