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Applicable Skills

Application

- Javascript (ES2015, ES7, experimental)
- Node.js
- Comfortable with targeting JS for multiple environments, using tools like RollUp and WebPack
- Python (CPython 2 and 3)
    - Intimate knowledge of WSGI, and applications and frameworks like Flask
- API Design (as in programming interfaces; architecture)
- Client-side application design, Elm descendents like React+Redux, as well as ML descendents like Purescript.
- SQL Design
- Intimate knowledge of latest browser builds and Web Extenstion API.
- Electron and React Native

Systems

- Intimate familiarity with modern Linux. Everyday OS: Ubuntu or Debian.
- Bash, legacy init systems, Systemd.
- Miscellaneous scripting languages such as awk.
- Containerization: Docker and Vagrant
- Strongest skills in Linuxes, but can live in an Apple environment.

Networking

- HTTP and HTTP (ReST) Interface Design
- Understanding of OSI Model and ability to diagnose and solve most layer 3 and above problems.
- Cloud providers: AWS and Rackspace, as well as VPS's; Linode, etc.

Development Environment

- Generally of the "editor + lots of terminal emulators" school (currently Atom or VSCode).
- Well-versed in different Git workflows, including Github, other Git front-ends, and email patches. Comfortable manipulating history (squashing, repairs, etc.)

Open Source Projects

Too many projects to list, but as a sample:

- A Python Nexrad (Weather Radar) decoder
- A Javascript Entity-Component-System Game Engine (minimal, but working)
- OpenSCAD-built models for printing (turns out that Github can render STL files, making Thingiverse unnecessary).
- Various documentation contributions; mostly just grammar, linking, etc.

Work history

- Senior Software Developer, Ihiji (now Control4) July 2015 - Present
  - Mentored team and moved company to a ReSTful architecture with a standard, horizontally-scalable stateless web server.
  - Wrote initial version of WSGI-based application server (Flask).
  - Built a native mobile application (iOS, Android) with React Native.
  - Designed and built React/Redux application and build tooling.
  - After acquisition, mentored and trained junior developers to use Javascript and functional programming paradigms.
- Software Engineer, Cratejoy 2014
  - Designed and built customer-facing JS website WYSIWYG app.
  - Implemented art redesign and introduced front-end build and asset management tools for company's web front-end (Python, JS, CSS).
- Senior Software Engineer, Famigo, Inc. 2012-2014
  - Maintained and extended AWS-based server architecture for a mobile application.
  - Introduced static asset pipelines and automation.

- - Communicated with Android and iOS developers for use of the HTTP API.
  - Application stack included Redis, AMQP, Mongo and Python (Django).
- Various consulting, 2008 onward

Esoteric But Current Applicable Skills

- Advanced Javascript and related DOM technologies: WebGL, SVG, etc.
- Functional Programming in Javascript and Javascript transpilation targets
  - React/Redux
  - Purescript
  - The "Fantasy Land" Project
- Function Programming in general
  - Haskell (ML Family in general)
  - Schemes (Racket in particular)
- Curiosity about and skills in esoteric architecture patterns like Entity Component System.

Recent Career History

- Senior Software Developer

  Ihiji
  July 2015-June 2018

- Software Engineer

  Cratejoy
  2014-2014

- Senior Software Engineer

  Famigo, Inc.
  2012-2014

Additional Experience and History

Same story as most in our field: Computing as a very young child (starting with a TRS-80 which required some basic knowledge with Basic to get started), PC clones and DOS/Windows during the 80s and picking up C. Music and art with Commodore machines like the Amiga 500. Hardhacks to make music with PCs in the early 90s, writing simple games.

Education

Besides work and personal experience, I dropped out of a community college while in a CS/Math program. I was a member of the last class to use C as a teaching language, as opposed to Java (for which I am eternally grateful). I was very fortunate to have a CS instructor from Bell Labs, from whom I learned a great deal informally during off-hours.

Total Work Experience

Considering consulting/contracting, personal work, and salaried FT employment, 15 years.

- Javascript and all other DOM technologies since the beginning (~1994)
- C, with enough competence and CS theory to justify my confidence, since ~1996
- Python since 2007
- PLT since ~2005
- Unix tools and similar (awk, perl, bash, etc.) since ~2001 (close to my first use of Linux)

Background

Open Source Projects

Too many projects to list, but as a sample:

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Current Languages of Interest

- Purescript
- Rust
- Javascript
- Haskell

- Python

Hobbies and Activities

- Programming Language Theory and History
- Amateur essayist: human rights, history, philosophy
- Category and Type Theory (I'm a dabbler, but it's extremely enjoyable to me).
- Electronic Engineering
  - Microcontrollers and circuit layout (in particular, Kicad). Garage-level fab.
  - 3D-Printing; early supporter of RepRap. Philosophical supporter of "Afghan Lathe" sort of projects and OSHW to encourage means of production moving to smaller and smaller social units; e.g., farmers using out-of-IP-protection designs for farm equipment, use of free (libre) IP Cores in FPGAs.
  - Early supporter of the IPython Notebook (now Jupyter) project as well, to encourage use of and sharing and reproduction of results with code in academic papers.
  - Loudspeaker design.
  - Astrophotography (and astronomy along with it)

Philosophy and Advocacy

- Open source (especially but not exclusively libre software, FLOSS).
- Human rights, spreading the means of production as widely as possible; including programming literacy and hardware fabrication skill.