# Davis Remmel

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#### PROFILE

Experienced free/libre and open source software specialist with over 10 years in industry and non-profit sectors.

Proficient at system administration and programming (GNU/Linux, FreeBSD, Bash, Python, HTML, CSS, JavaScript (ES6), SQL, and more). Knowledgeable in every level of the stack, from transistors to transpiling.

Acclaimed software designer with strong skills in IP networking, technical documentation, and customer support. History of building REST APIs, data ETL processes, and web scrapers.

## WORK EXPERIENCE

- Support over 6,600 users with timely and effective responses through email and Reddit. Wrote comprehensive manuals
  and technical documentation to minimize support requests.
- · Automate operations, payment processing, and communications with Bash, SQLite, and Gnuplot.
- Maintain a cross-platform desktop application (Python/Qt 5/AGPLv3+), earning over \$2,000/month.
- Read and understood the Adobe PDF specification to write a raw PDF object renderer for the reMarkable file format, supporting features beyond the manufacturer's capabilities.
- Ported Debian and Parabola GNU/Linux-libre to the reMarkable tablet, creating the first fully-free e-reader, recognized by FSF Executive Director John Sullivan in a keynote address.

- Oversaw bare metal infrastructure using Proxmox/QEMU+KVM, supporting over 100 virtual machines for enterprise clients. Developed tooling for reproducible disk images, switch configurations, data center rack schematics, and realtime monitoring.
- Eliminated \$15,000/year in software license fees by designing a self-hosted data acquisition/reporting platform (IoT) entirely from libre software (pfSense, BIND, OpenVPN, PostgreSQL, Grafana, configured redundantly).
- Reduced form submission time by 90% in a 500,000-line PHP program, dropping database load by 50%, saving our client over 250 employee hours weekly. Maintained hazardous legacy programming.
- Authored detailed procedures and documentation for retail cloud infrastructure. Integrated SNMP and Syslog into a unified database with internal wiki-embedded dashboards and a public web portal for client access.

- Managed a dataset of millions of items and buyers used with 12 internal projects. Scripted ETL operations (Rust, Node.js, MySQL) targeting SOAP/XML endpoints.
- Developed a recommender system generating four-billion recommendations daily.
- Created a dataflow processor/visualization web app and wrote its public REST API (D3.js, Node.js).
- Codified spreadsheets into reliable programs supporting a team of economists in price forecasting. Wrote web scrapers to poll metal prices.
- Migrated legacy servers to Docker containers and maintained over 20 WordPress sites with custom themes, templates, and functions.
- Instituted a companty-wide data governance policy with automated vulnerability reports (OpenVAS).

#### ADDL. EXPERIENCE

- Provided front-line support, answered phones and online queries, and managed office supplies. Greeted visitors with a warm welcome and gave tours.
- Managed GNU Press shop operations, including stock management, product design, and order fulfillment. Wrote scripts to estimate stock run-outs, reorder dates, and needed quantities.
- Processed \$10,000+ in monthly donations and maintained accurate CiviCRM donor records.
- Coordinated monthly membership mailings (100 pc.), yearly fundraising mailing (10,000 pc.), and volunteer efforts for LibrePlanet conference. Interfaced with USPS bulk mailing unit and applied for necessary permits.

• Moderated online chat rooms for FSF's LibrePlanet 2020 and 2024 conventions, ensuring discussion remained constructive and respectful.

## SOFTWARE

Languages Shell/Bash, Python, HTML, CSS/Less/Sass, JavaScript (ES6), PHP, SQL, C, Rust, SVG, XML/XSLT, LATEX, R, Objective-C, BASIC, GCODE

OS GNU/Linux (Debian, Fedora, CentOS, RHEL, openSUSE, Ubuntu), FreeBSD, pfSense, QEMU, Proxmox

Databases PostgreSQL, TimescaleDB, SQLite, MySQL, ZFS

Networking Pf, Tcpdump, Wireshark, BIND, OpenVPN, SSH, Nginx, Fail2ban, Snort.

**Development** Emacs, Git, Qt, Flask, SQLAlchemy, Node.js, D3.js, Bootstrap, Selenium, Angular.js, Docker, Ansible.

Alerting Nagios, Grafana, MRTG, SNMP, Syslog

Analysis Sed/Grep/Awk, RStudio, Gnuplot, GNU Octave, OpenVAS

Media ImageMagick, GIMP, Inkscape, Blender, Ffmpeg, FreeCAD, Kdenlive, DigiKam, Autodesk Inventor

**Administration** PGP/GPG, GitLab/Gitea, MediaWiki, DokuWiki, Request Tracker, IRC, LibreOffice, GnuCash, CiviCRM

Proprietary Slack, GitHub, Microsoft Office, Google Docs, Adobe Creative Suite, Autodesk Inventor

## ASSOCIATIONS

Electronic Frontier Foundation (EFF), Free Software Foundation (FSF), Internet Archive (IA), American Civil Liberties Union (ACLU), Linux Weekly News (LWN)

## HOBBIES & INTERESTS

Computer programming. CNC fabrication. 3D modeling/sculpture. Film photography. Media archival/conversion. Electronic design. Nature walks; going on trips and taking perspective. Electric vehicles. UFOs.