

MATTHEW ARNOLD

Software Engineer

Syracuse, NY 315-278.5673 Matt@thegnuguru.org <https://git.sr.ht/~marnold128/>

EDUCATION

BS, Computer Science SUNY Polytechnic Institute | *Utica, New York*

2017

PGP: 9239 4662 BC03 8F2F 67CD 10D5 B472 40EE 0C71 19B7

TECHNOLOGIES

Languages: Python, Golang, C, C++, Rust, Haskell, Java, BASH/kash, Assembler x86, amd64, R, SQL, MATLAB

Operating Systems: FreeBSD, OpenBSD/NetBSD, Red Hat, Shell, Gentoo, Debian, Ubuntu, Windows

Databases: MySQL, Postgres, Firebird, SQLite

Frameworks/Servers: Apache, Tomcat, Quixote

WORK EXPERIENCE

Ongoing Media Work:

The Joy of Linux: YouTube Vodcast and Twitch Stream:

- Lively discussions into the artistic side of computing, with live coding demos.
- Exploration of fangames/indie games/rom hacks <https://joyoflinux.com>

Article Written, "Why I switched to Fedora,":

- <https://fedoramagazine.org/matthew-arnold-why-i-switched-to-fedora/>

Blog:

- <https://piusbird.space/wordpress>

Software Development work:

RabbitEars:

- Built a custom Internet Relay Chat Client automation framework 1/2022

VSSS:

2014-Present

- Developed a front-end to various Linux text-to-speech systems providing those with print related disabilities with reading functionality under Linux.

MasterText:

2020-Present

- Designed and implemented a python-based document search system providing storage, retrieval, and search functionality for large datasets of freeform text

Neofingerd:

2020-2021

- Designed and implemented a new server for the finger protocol

Ongoing Linux Desktop Software Development:

- Created specialized software for those with rare visual impairments or print related disabilities print related disability dyslexia, cortical visual impairment, or cerebral palsy.

Corporate Experience:

Contingent Computer Systems Software Scientist | Pro-Unlimited 5/2019-9/2019

- Advised on the deployment of Kubernetes Cluster
- Contributed to web applications using Python-based technologies including Django and Celery
- Orchestrated diagnostic testing, maintenance, and support on internal systems

Software Engineering Intern | NaviSite 2012 - 2014

- Responsible assisted in maintaining a custom python MVC framework web application
- Completed research for upcoming product features such as, virtual network switches and physical to cloud migration
- Assisted in testing and deployment of customer facing OS upgrades including debugging Linux kernel driver issues

System Administrative Aide | Morrisville State College Spring 2010

- Maintained Unix and Shell servers for the department of Computer Science

System Administrator | Jcink.com 2008-2010

- Contributed to the development of new products including Air Proxy
- Administered critical systems, advised on hardware and software upgrades

Volunteer Contributor | Debian Project 2007-2017

- Contributed to core features including Yabause, lilo bootloader, and gnug PECL extension
- Provided briefing on Technical Committee decision #587866, relating to the lilo boot loader

Volunteer Contributor | Ubuntu 2007-2010

- Responsible for first line bug triage crash diagnostics and package maintenance
 - As a package maintainer, resolved merge conflicts in source code particularly those which caused stability issues
 - Evaluated new software for inclusion in ubuntu and proposed security updates as necessary
-

SPEAKING ENGAGEMENTS

OpenBSD on the server - Security B-sides Rochester 3/2021

- Provided on overview of OBSID unique features & a live demo of the pledge(2)

IRC Servers The Basics - Syracuse Linux Users Group 10/2021

- Provided instruction on how to set up their own chat server using IRC

Qemu user mode - Syracuse Linux Users Group 1/2020

- Explored the kernel's Binfmt-misc interface and how this can be leveraged to support multiple CPU architectures in a single Linux installation
- Explored the chroot and name space subsystems to provide isolation of foreign binaries without the need of a full hypervisor

How secure is your Linux Distro? - Security Besides Rochester 4/2016

- Introduction to software supply chain security
 - Examined recent Linux mint security breach as a negative case study to explore concepts
-

COMMUNITY INVOLVEMENT

- Tutored unprivileged adults in computer programming, Linux system administration and other highly skilled computer functions
- Volunteered with local churches consulting on web development, and other communication, and accessibility needs.