

Gabriel McNinch

Arlington MA 02474

| gabemcninchwork@gmail.com

Summary

Recent Tufts University Computer Science graduate. Open Source enthusiast and Linux daily driver. I have contributed to open source projects. Open to software engineering, embedded systems development, DevOps, and IT roles.

Projects

Selected projects from my Github: <https://github.com/gabman15>

- **VideoSync:** A low-latency video synchronization program written in C using TCP and UDP sockets as well as a NodeJS web app that allows people to watch videos together.
 - **My Blog:** My website which I wrote using the Jekyll framework with HTML and CSS that I deploy using Github Pages. Source Code: <https://github.com/gabman15/nitori-gmcn>
 - **My Home Server:** I maintain a Linux server at home that runs various services that I use as well as acts as a backup platform for archival.
 - A Plex instance deployed using docker-compose that aggregates metadata about the tv series I store on my server and allows me to watch them with friends over the internet.
 - MPD, a music player daemon which creates a database of my entire music collection and allows me to listen to them over the internet using SSH port forwarding. Also automatically updates my last.fm account with the songs I listen to.
 - An image database that I maintain for backing up art I like. I run a Python script on my computers that grabs a random image from the database using REST requests and token authentication and sets it as my desktop wallpaper. <https://github.com/gabman15/gabe-backgrounder>
 - **Geimu:** A video game I helped work on using a C# game engine called Monogame. I worked on the drawing sprites and backgrounds systems as well as the level state machine. I also worked heavily on the level design. Developed in 3 days for the Touhou Fan Game Jam.
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Software Skills

- Full Stack: C (TCP/UDP Network Socket Programming, GTK, X11), Python (Requests, REST API, Urllib3, Poetry), Javascript (NodeJS Web Servers, Discord Bots, REST API), C++, Ruby (GTK, Jekyll), C#, Java, SQL (Postgres, SQLite), MongoDB, HTML, CSS, Lua, OCaml
 - Embedded Systems: C (Embedded C, STM32 HAL Library), ARM Assembly, x86 Assembly, PlatformIO, Keil MDK
 - DevOps: Scripting (Bash, Cron, SystemD, Python, SSH), CI/CD/Version Control (GitHub, GitLab), Containers (Docker, Kubernetes, Podman), Cloud (AWS)
 - Misc: Emacs, Git, Linux, LaTeX
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Education

Bachelor of Science, Computer Science | Tufts University

2018-2023

- Founding member of the Tufts University GNU/Linux User Group (tugslug.org)
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Work Experience

Instructor | Z-Kai USA, Arlington MA

2021-2023

- Taught kids aged 6-12 basic robotics using Lego products
- Taught kids aged 6-12 basic programming using Scratch, Python, Javascript, and Java