

Gabriel McNinch

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Summary

Recent Tufts University Computer Science graduate. Open Source enthusiast and Linux daily driver. Contributor 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:** written using the Jekyll framework with Markdown, 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 running various useful services and acting as a backup platform for archival, including:
 - A Plex instance deployed using docker-compose that aggregates metadata about media on my server and allows me to watch videos 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 selections over the internet using SSH port forwarding. It also automatically updates my last.fm account with the songs I listen to.
 - An image database that I maintain for preserving art I like. A Python script on my computers 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. It was 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 (<https://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