Timothy Southwick

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github.com/NickNackGus/Portfolio
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https://github.com/TeamMonumenta/

Dedicated software developer with Master's Degree in Computer Engineering seeking full time software development employment, either remote or in central Massachusetts.

EDUCATION

University of Massachusetts Lowell, Lowell, MA

Master of Engineering in Computer Engineering	GPA: 3.5/4.0	July 2018
Bachelor of Engineering in Computer Engineering	GPA: 3.1/4.0	May 2016

RELEVANT SKILLS

Languages	Java	C/C++	Rust	Python 3	Python 2	Verilog
	JavaScript	JSON	Lua	BASH	BASIC	Assembly
Software	Linux	Git	SSH	Gradle	Maven	screen
	Redis	RabbitMQ	Kubernetes	Docker	tmux	ALSA

Hardware FPGA I2C PIC Microcontrollers Raspberry Pi Arduino LEGO robotics (using C)

PREVIOUS EXPERIENCE

Lead Developer for Monumenta Games LLC (MMORPG based on Minecraft, 2017-Present)

- Website: http://www.playmonumenta.com/ Username: NickNackGus
- Volunteering independently and collaboratively with a global team of over 50 people.
- Helping deploy and maintain a network of 70+ Kubernetes Docker deployments on several domains across multiple dedicated servers, with RabbitMQ for messages and Redis for long-term player data.
- Charting Python/Rust automation programs for weekly updates and maintenance.
- Spearheading cross-server Java plugins, including:
  - Chat plugin with configuration saved as json in Redis and messages via RabbitMQ.
  - Timing-sensitive scoring system providing eventual consistency.
- Implemented custom parser of JSON-like data for use in a data editing tool.

Firmware Engineer for Doble Engineering July 2019-July 2021

- Developed high level firmware for signal generation, data acquisition, and signal analysis for use in power transmission and protection equipment testing.
- Improved file transfer, debugging DHCP network issue.
- Automated collection and processing of error code logs for quarterly reports.
- Devised and implemented method to process large amounts of data in the background using a small amount of memory.
- Firmware in C++ via gcc, debugging with gdb, testing with Python, and committed through Git.
- Connection to Linux test hardware via SSH and screen.

Personal Projects

Full-time Linux user since 2009

- Home desktop doubles as SSH/SFTP file server.
- Wrote 150+ programs for daily use and amusement in BASH, Python, Lua, C, and assembly.

Capstone Project: Audio Processor for Mobile Audio Editing and Recording

- Used the BeagleBone Black, Debian, C, I^2C, ALSA, and ssh to record, edit, and play audio.