

GEOFFREY KNOX

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WORK EXPERIENCE

Tenzinc

Software Engineer

Glasgow, Scotland, United Kingdom

December 2021 - Present

- Administer and automate Linux-based systems (Ubuntu/Debian) via DigitalOcean to support scalable IoT infrastructure across multiple client sites.
- Developed fault-tolerant telemetry processing software, deployed via custom Debian APT and DevPI servers that I built and maintain.
- Built IoT telemetry dashboards using Thingsboard (HTML, CSS, JavaScript) to visualize real-time building and device data for clients.
- Designed and maintained internal APIs using Node.js (Express), Next.js API routes, and FastAPI to handle device provisioning, user management, document handling, and transaction workflows for bespoke internal tools.
- Researched and implemented cost-effective IoT hardware alternatives, significantly reducing deployment expenses across customer locations.
- Ensured uptime and reliability of customer-facing platforms, including provisioning user accounts, system monitoring, and rapid incident response.
- Contributed to full-stack development of business-supporting tools and client portals using Next.js, React, and C#/ASP.NET.
- Delivered customer support directly, resolving platform and data concerns, and quickly implementing requested changes or fixes.
- Managed CI/CD workflows and containerized deployments across internal infrastructure to maintain development velocity and platform stability.

NVT Group

Software Developer

Glasgow, Scotland, United Kingdom

November 2020 - December 2021

- Assisted in the development of the Community Justice Scotland application as a full stack developer, using HTML, CSS, JS, C#, Python, and MSSQL to fulfill development requirements.
- Communicated with application testers pre-deployment to ensure application requirements were met.
- Developed specialized load testing software to ensure that the application could meet contracted amount of necessary requests per unit of time.
- Investigated and fixed post-release bugs reported from users, while reporting back to them in a timely manner.
- Used Azure Devops for version control, CI/CD, and project management.

GreenThumb Automation

Software Developer

Albuquerque, New Mexico, United States

May 2020 - December 2020

- Used Java to develop an Android app while delivering weekly updates on progress.
- Took suggestions from managers and clients in order to make the app better and more user friendly.
- Had to quickly learn how to read Objective-C and improve on HTML, CSS and Javascript in order to successfully perform the required duties.
- Used Git for version control of the app and uploaded builds onto Google Play.

TRAX International

Software Engineer Intern

White Sands Missile Range, New Mexico, United States

June 2017 - December 2019

- Assisted on multiple projects during undergraduate degree including network engineering and software engineering projects for TRAX Intl. telemetry department.
- Worked in the Management Information Systems department maintaining web interfaces for the tracking of project spending and assets for the company using a combination of K2 Blackpearl, C#, and T-SQL.

New Mexico Institute of Mining and Technology
Webmaster

Socorro, New Mexico, United States
March 2016 - January 2018

- Maintained websites for the Office of Student Learning. Wrote and reworked code in HTML, CSS, and PHP.
- Updated general UI/Layout and restructured sites as needed in order to optimize for usability as deemed necessary by owners of website/client.

PROJECTS AND EXHIBITIONS

Tiny Tech Robotics at Open Sauce 2024

https://www.tinytech.tech/OS_2024.html

At Open Sauce 2024, I co-developed a set of interactive bipedal robots for a public exhibition booth, where attendees could walk up, take control, and engage in physical games. The robots supported two control modes: a standard Xbox-style controller for direct control, and a motion capture setup powered by Google MediaPipe that allowed users to control all robots simultaneously through body movement. I implemented the control systems in Arduino C, and built a custom admin interface using Python and PyQt to track robot movement and manage gameplay. I also created a real-time scoring display to showcase player performance during sessions. The project blended embedded systems, computer vision, and UI development to deliver an engaging, hands-on robotics experience for thousands of curious attendees.

SKILLS

Languages:	Typescript/Javascript, Python, Java, C#, C, C++, SQL, HTML, CSS
Frameworks:	NextJS, ExpressJS, ASP.NET, PyTest, Mocha, Chai
Tools:	Docker, Git, Azure (DevOps, Pipelines), DigitalOcean, AWS (basic), Appwrite, Firestore
DB Experience:	PostgreSQL, MongoDB, Redis, Cassandra, SQL and NoSQL

EDUCATION

New Mexico Institute of Mining and Technology
Bachelor of Science in Computer Science

Socorro, New Mexico, United States
September 2015 - May 2020