NATHANIEL LEE

Software Developer / System Engineer

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in Nathaniel Lee

📇 Portfolio Website

WORK EXPERIENCE

Software Developer / IT Storage System Engineer   *General Motors* / *Warren, MI* / *June 2022 - Sep 2024*
- Managed and administered UNIX-based NAS storage across GM's global infrastructure, ensuring high availability, data integrity, and reliability for mission-critical applications such as GM Defense operations.
- Collaborated with cross-functional teams and vendors to optimize performance, deploy new hardware, decommission legacy systems, and implement security measures, improving infrastructure efficiency roughly 20%.
- Designed and deployed REST API endpoints and Python automation tools that replaced manual storage tasks, improving efficiency by 30% and eliminating hundreds of hours of after-hours work annually.
- Supported containerized storage infrastructure in Linux and Kubernetes environments, enhancing scalability, fault tolerance, and system resilience.
- Debugged and optimized internal full-stack applications using Django, ensuring reliable storage data visualization and preventing metadata corruption after infrastructure changes.
- Developed Power BI dashboards and automated batch scripts to deliver monthly and annual analytics, supporting decision-making at the executive level and operational performance tracking.
- Consistently led the team in ticket resolution by troubleshooting application, server, and infrastructure issues, driving operational efficiency and maintaining accountability in high-stakes environments.
- Identified and resolved bugs in internal storage tools, improving reliability while championing automation and process improvements that streamlined IT workflows across global operations.

Access Control Student Assistant   *Ohio State University Office of Student Life* / *Columbus, OH* / *Oct 2021 - April 2022*
- Administered campus-wide key-card access systems by troubleshooting hardware/software issues, updating permissions, and developing a batch script to automate maintenance tracking and reduce downtime.

Cryo-EM Research Assistant   *Ohio State University CEMAS* / *Columbus, OH* / *April - Aug 2021*
- Processed and reconstructed samples in CryoSPARC, analyzing characterization techniques to generate final models that saved researchers days of preparation per sample.

EDUCATION

University of Austin – College of Natural Sciences / *Jan 2026 – Present*
- Master of Science in Computer Science

University of Illinois Urbana-Champaign – Grainger College of Engineering / *Aug 2025 – Dec 2025*
- Master of Computer Science

The Ohio State University – College of Engineering / *Aug 2018 – June 2022*
- Bachelors of Science in Computer Science and Engineering
- Dean's List recipient

PROJECTS

Minecraft Forge Open-Source Collaboration and Development
- Developed and modified Forge mods, enhancing gameplay mechanics and contributing bug fixes, features, and code improvements to open-source projects. *(Java, Spring Boot, JavaScript, Forge API)*

Quality of Wine Prediction Models
- Built neural network models (linear regression, CNNs, RNNs) to predict wine quality from regional weather data (temperature, precipitation, wind, pressure) over time. *(Python, TensorFlow, Keras, Scikit-learn, NumPy, Pandas)*

Spotify Playlist Recommender
- Created a chatbot UI with Amazon Lex, Django, and Spotify API to recommend playlists based on user mood, integrating OAuth 2.0 and automated track selection. *(Django, Flask, React, Spotify API, Amazon Lex)*

SKILLS

Java, Python, C, C++, C#, Ruby, MATLAB, R, SQL, JavaScript, HTML, CSS, PyTorch, TensorFlow, Spring Boot, Django, React, Angular, Bootstrap, jQuery, PostgreSQL, SQLite, MongoDB, Node.js, Git, Docker, Azure DevOps CI/CD, Linux/UNIX, Batch/Shell Scripting