Jonah Cole Biedermann

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Work Experience

Computer Scientist, United States Air Force, Oklahoma City, OK   Jul 2024 – Present
- I worked on a project to improve the searchability of our vast internal knowledge base, which contained a mix of technical documentation, policy documents, and project reports.
- I leveraged Azure services and integrated a custom LLM model to generate rich semantic indexes of the ingested documents. This allowed for more accurate and context-aware search results.

Full-stack Software Engineer, Oregon Country Fair, Eugene, OR   Jan 2024 – Jun 2024
- Developed and maintained a membership database application, creating a new MariaDB database using Docker and Kubernetes to manage memberships. Also used Nest JS to create an API to connect with the database.
- Created a React Based front-end using Typescript with TailwindCss styling for users to update their information.

Software Engineer, Daimler Trucks North America, Portland, OR   Jun 2023 – Dec 2023
- Developed a full-stack CRUD application using Visual Studio and SQL database for managing service repair times, handling backend logic and data persistence, resulting in a significant reduction in support tickets.
- Mitigated data loss risks through the development of an application for automated database backups using Powershell and SQL Server.
- Implemented changes to integrate the Twilio API into Uptime-Pro, enhancing notification functionality seamlessly.

Software Engineer, Mosaic.Tech, San Diego, CA   Mar 2022 – Sep 2022
- Utilized Azure API Management to secure and govern financial transaction APIs, enforcing strict authentication protocols and implementing comprehensive monitoring for compliance-critical endpoints.
- Integrated Snowflake Data Warehouse with OAuth using Angular and TypeScript, handing over 50TB of data without performance degradation.
- Utilized DevOps best practices, including CI/CD pipelines and automated testing using jenkins, to streamline development processes and enhance software quality.

Data Structures / Algorithms Teaching Assistant, Oregon State University, Corvallis, OR   Jun 2021–Dec 2021
- Assisted 200+ students in understanding and applying data structure and algorithm concepts.
- Designed challenging assignments that led to an 85% improvement in student coding proficiency.

Embedded Software Engineer, OPENS Lab, Corvallis, OR   Jan 2021–Jun 2021
- Led a cross-functional team of 8 engineers and developers for the "WeatherChimes" project, utilizing the OPEns Lab API: Loom, to enable the seamless transmission of weather data from an Arduino Feather M0 to a low code application called MaxMSP.
- Innovatively developed an audio-visualization system tailored for MongoDB data, achieving a 3x improvement in data comprehension and analysis for users.

Projects

Anomaly Detection for Construction Use Case   Sep 2022 – Jun 2023
- Utilized state-of-the-art deep learning techniques, including YOLOv5 and masked autoencoders, to achieve a 95% accuracy rate in anomaly detection, significantly reducing false positives.

Education

Oregon State University
Bachelor of Science in Computer Science   GPA: 3.83/4.00
Coursework: Artificial Intelligence, Machine Learning, Web Development, Mobile Development, Cybersecurity

Skills

Languages: Python, .NET, C#, JavaScript, JavaScript/Typescript, SQL, Java, Linux , Scripting (Bash / Powershell)
Frameworks: Django, PyTorch, TensorFlow, CUDA, OpenCL, React.js, Microsoft Azure, SQL Server