Chun Lu

chun.lu.dev@gmail.com | https://www.linkedin.com/in/chun-lu/ | https://chunlu.github.io/ | 917-838-8738

Technical Skills

Programming Languages: Python, Java, Javascript, C#
Front-End: React, Bootstrap, CSS, HTML
Back-End: Django, Django Rest Framework, Flask
Databases: PostgreSQL, MongoDb, Redis
DevOps: Ansible, Docker, Podman, GitLab CI, GitHub Actions
Additional Tools: Git, AWS, REST, GraphQL, Poetry, YAML, Jinja, Node.js, SQL, Jira

Experience

Software Engineer July 2018 – Current
Naval Information Warfare Center Pacific (NIWC PAC) *San Diego, CA*

- Implemented a scalable site design using prebuilt Django application, Python, Jinja templating, and YAML. This design allows for efficient creation and management of numerous sites through automation.
- Reduced SD-WAN device provisioning time from 3 hours to 10 minutes by automating configuration with Ansible, Jinja templating, Python, and REST APIs.
- Developed and implemented a GitLab CI pipeline for automated build, test, and deployment. This pipeline streamlines the development workflow by automating tasks like testing and image builds, leading to improved efficiency.
- Migrated queries from REST to a single, optimized GraphQL request, simplifying data retrieval and codebase. This enhanced maintainability, promoting faster development cycles and improved code quality.
- Contributed to the development of a full-stack web application using React, Django Rest Framework, and Postgres. This application facilitates efficient 3D file hosting and management.
- Pioneered the development of interactive 3D PDFs for component visualization using custom LaTeX templates and embedded U3D models. This innovative approach leverages LaTeX's capabilities to generate dynamic 3D content within PDFs, enhancing usability and accessibility for users.
- Improved the existing system by adding a real-time data processing and visualization system using C# and XML to handle GPS satellite data. This feature eliminates the need for post-processing with external software resulting in faster analysis and testing.
- Developed a Python-based tool using the Pandas library to refine and validate raw sensor data logs. This tool automatically eliminates inconsistencies like outliers and missing values, and auto-generates relevant plots and graphs (e.g., histograms, time series) for analysis. This resulted in a significant reduction in data preparation time, enabling faster and more efficient data analysis.
- Empowered real-time anomaly detection with an interactive Flask dashboard, leveraging Python and Matplotlib to visually highlight deviations and inform rapid decision-making.

Data Analyst Intern July 2017 – August 2017
NYC Department of Information Technology and Telecommunications (NYC DoITT) *New York, NY*

- Designed and implemented a mobile inspection app using Java, MongoDB, and Mongoose. This streamlined the workflow, leading to reduced inspection time and decreased data errors, improving overall project efficiency.
- Leveraged REST APIs to query LinkNYC data from OpenData, formatting it into user-friendly CSV for easier management and updates.
- Created product life cycle diagrams using Microsoft Visio, facilitating task identification for development.

Certifications and Clearances

AWS Certified Cloud Practitioner
Validation Number: 85534bca94154672addb7967254a3e78 *January 22, 2024 – January 22, 2027*

Secret Clearance
Active *July 2019 – July 2028*

Education

Stony Brook University Stony Brook, NY
Bachelor of Engineering, Computer Engineering *August 2014 – May 2018*