Dennis Lustre

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Education

University of California, Irvine September 2020 - June 2024
Bachelor of Science in Computer Science *Irvine, CA*

- **GPA**: 3.63/4.0 (8x Dean's List)
- **Leadership & Involvement**: ICS Student Council Projects Committee, FUSION (Filipinx Undergraduate Scientist-Engineers in an Organized Network)
- **Courses**: Computer Vision, Artificial Intelligence, System Design, Data Structures & Algorithms

Experience

Software Developer May 2024 - November 2024
Boundary Remote Sensing Systems *Remote*

- Greenfielded an ML pipeline to generate reports with data visualizations tailored to geospatial data, utilizing **HuggingFace Transformers** for inference.
- Designed and implemented a **React** app for analyzing 3D geospatial data by integrating **Cesium** and interfacing with backend services using **Zustand**.

Fullstack Engineer Intern July 2023 - July 2024
Thaddeus Resource Center *Remote*

- Led the full lifecycle of a fullstack Next.js app, achieving a 50% reduction in infra costs.
- Managed a team of 6 web developers and accelerated their development by building a CI/CD pipeline, automating tests, builds, and deployments for staging and production using **GitHub Actions**.
- Boosted organizational efficiency by developing internal systems, including a staff management dashboard and a blog review system.

Projects

Lox Interpreter | *Golang* | GitHub

- Developed a recursive descent parser and tree-walk interpreter for the Lox programming language.
- Implemented mutable variables, scoped blocks, and leveraged errors-as-values to simplify static and runtime error handling.

Redis Implementation | *Elixir* | GitHub

- Implemented a Redis server with support for RDB persistence and replication.

Gesture-Controlled Robot Arm | *C++, Arduino* | GitHub

- Led development of embedded software for a gesture-controlled robot arm using **Arduino** microcontrollers, Bluetooth modules, and flex sensors.
- Won 1st place and 2 additional awards at the FUSIONCon competition: **Sponsor's Choice** and **Most Innovative Design**.

NASA Radiation Microscopy Generative AI Model | *Python, PyTorch Lightning* | GitHub

- Furthered research on the effects of cosmic radiation on astronauts by developing a Generative Adversarial Network to augment NASA's BPS microscopy dataset, generating images that mimic irradiated cells.
- Classified images with 93% accuracy on a large subset of the domain by leveraging ResNet101.

Geospatial Web Game | *TypeScript, React.js, Tailwind CSS* | GitHub

- Developed a browser game in 24 hours, utilizing a reverse geocoder to generate geospatial clues for players to guess Orange County cities.
- Won 2 awards at Data@UCI's Datathon competition: **People's Choice** and **Best Use of Melissa Data API**.

Technical Skills

Programming Languages: JavaScript, C, C#, Java, Rust, OCaml, SQL, HTML
Technologies: Node.js, Linux, Docker, AWS, NoSQL, NumPy, pandas, MySQL
Other: Visual Studio, Bash Shell Scripting, Powershell, GitLab, Agile, Scrum, Jira (Kanban)