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San Jose, California  
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# Owen Mastropietro

GitHub: owenmastropietro  
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## EDUCATION

**Master of Science — Computer Science**, *San Jose State University, California*  
**Bachelor of Science — Computer Science**, *Sonoma State University, California*

In Progress  
Awarded Fall 2023

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## RESEARCH

### Graduate Research / NeuroLoop

<https://sites.google.com/sjsu.edu/gautamkumar/home>

In Progress  
San Jose, California

- Developing novel RL-driven cl-DBS system for controlling excitatory-inhibitory network synchronization.

### Graduate Research / FathomView

<https://github.com/owenmastropietro/fathomview>

January 2024 — May 2024  
San Jose, California

- Developed deep learning models for enhancing and correcting underwater images for the Monterey Bay Aquarium Research Institute; accompanied by an IEEE report.

### Private Research / Aero Momentum

<https://aeromomentum.com>

August 2022 — May 2023  
San Jose, California

- A computational study for an on-board ADS-B driven Collision Avoidance System.

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## SELECTED PROJECTS

### FathomView — Underwater Image Enhancement

Python / PyTorch / TensorFlow

- Developed deep learning models for enhancing and correcting underwater images for MBARI.

### FLCDA — Distributed Network for *in silico* Federated Learning

Docker / Python / PyTorch / TensorFlow

- Developed an in silico distributed network model to compare centralized and decentralized approaches to distributed learning.

### Lobo Shell — Interactive shell

C / Bash

- Command line shell with support for pipes, I/O redirection, and character escapes.

### Capstone Streaming App — Music Streaming Application

React / Koa.js / MySQL

- Full stack music streaming application based on Spotify.

### Orbital Deployment — Satellite Deployment Optimization

C++ / Bash

- Optimize the planning and execution of satellite deployment missions, maximizing profitability and efficiency, ensuring timely and cost-effective delivery of satellite payloads into their designated orbits.

### Draught Services — Transaction Analytics Dashboard

React / Koa.js / MySQL

- Developed a data visualization dashboard to provide clients with important analytics, helping optimize service routes and ensure consistent performance across multiple cities.

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## EXPERIENCE

### Service Representative / Audi Stevens Creek

<https://www.audisanjose.com>

June 2019 — Present  
San Jose, California

- Worked on early vehicle diagnostics using onboard systems to enhance reliability and customer communication, directly improving service efficiency.
- Utilized MySQL to create and maintain databases for tracking and optimizing various aspects of the service center.

### Service Representative / Ship Smart

<https://www.shipsmart.com>

June 2017 — August 2021  
Aptos, California

- Process Automation: Proposed and led initiatives to automate shipment tracking and status updates, significantly reducing manual labor and improving the system's scalability.

### Internship / Joseph M. Long Marine Laboratory

<https://seymourcenter.ucsc.edu>

June 2016 — August 2016  
Santa Cruz, California

- Conducted research on the harms of carbon emissions along the coasts of the Bay Area.
- Guided tours and exhibitions, educating the public on current research findings.

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## SKILLS

### Languages

Python, C/C++/CMake, Go, JavaScript, HTML, CSS, MySQL, Bash, Markdown, LaTeX, and Scheme.

### Tools

Git, GitHub, Apache Hadoop/Mahout/Spark, React, MUI, Node.js, Koa/Express.js, Pytorch, Tensorflow.