

## 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

## RESEARCH

**Graduate Research / NeuroLoop** In Progress  
<https://sites.google.com/sjsu.edu/gautamkumar/home> San Jose, California

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

**Graduate Research / FathomView** January 2024 — May 2024  
<https://github.com/owenmastropietro/fathomview> 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** August 2022 — May 2023  
<https://aeromomentum.com> San Jose, California

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

## 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.

## EXPERIENCE

**Service Representative / Audi Stevens Creek** June 2019 — Present  
<https://www.audisanjose.com> 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** June 2017 — August 2021  
<https://www.shipsmart.com> 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** June 2016 — August 2016  
<https://seymourcenter.ucsc.edu> 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.

## 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.