Emil De Guzman

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Interdisciplinary researcher and developer with hands-on lab experience and Python fluency. Skilled in troubleshooting lab workflows, managing sample pipelines, and analyzing biological data for research and diagnostics.

Technical & Laboratory Skills

Python, R, JavaScript, Git, Debugging, Data Analysis & Visualization, Lab Equipment Maintenance, Sample Workflow Management, QA/QC, Troubleshooting, Technical Reporting, ArcGIS, Cross-Functional Collaboration

EXPERIENCE

City College of San Francisco, Teachers Assistant and Computer Science Tutor *January 2025 - June 2025*

- Assisted students with computer science coursework, including debugging, programming concepts, and project support in areas such as Object-Oriented Programming, Data Structures, Algorithms, and Computer Architecture
- Fostered an inclusive and collaborative learning environment to promote skill development and confidence in foundational and advanced computer science concepts

Mission Bit, Lead Front-End Web Development Instructor *January 2024 - August 2024*

- Taught front-end web development (HTML, CSS, JavaScript, Figma) to 30+ under-resourced high school students in San Francisco, increasing digital literacy through a 10-week, project-based curriculum tailored to evolving student needs.
- Led curriculum design and managed a cross-functional team of 8 instructors and TAs, ensuring **100%** on-time completion of 30+ student web projects that met technical and design standards

Recurse Center, Participant *December 2021 - March 2022*

- Built personal projects in **Python** and JavaScript (e.g., Dryclo, Bog Blog, and Space Invaders) to explore data processing, interactivity, and design patterns
- Debugged and resolved issues in the open-source Recurse Center presentations codebases (JavaScript/React)
- Facilitated onboarding sessions for new participants, fostering a collaborative learning environment aligned with continuous improvement principles

Center for Watershed Sciences, Research Assistant *April 2018 - October 2018*

- Analyzed and **debugged** large-scale environmental sensor datasets (80,000+ entries) using **Python**, **R**, and **Excel** to model hydrologic variability
- **Troubleshot** and maintained lab equipment (e.g., water quality sensors, automated samplers, centrifuges) to ensure accurate, uninterrupted data collection
- Managed end-to-end sample workflows—including preparation, labeling, and submission—for nutrient and stable isotope analysis, maintaining a **100% accuracy** and submission success rate
- Deployed and calibrated autonomous aquatic sensors for real-time data collection, performing **QA/QC** checks to ensure data integrity for biogeochemical research
- Collaborated with scientists and lab technicians to streamline sample processing and improve data reproducibility across field and lab environments

University of California Davis, Wood Duck Project, Field Intern *March 2017 - June 2017*

- Collected genetic samples (tissue and blood) for DNA sequencing to analyze genetic diversity and survivability
- Tagged wood ducklings with passive integrated transponder tags to track movement and monitor population dynamics
- Maintained and monitored 25+ radio-transponder systems, ensuring proper functionality of solar panels
- Mapped wood duck nesting activity using GPS and tracked hatching success rates to support field population studies

EDUCATION

City College of San Francisco – Associates in Computer Science *May 2025*
University of California Davis – Bachelors of Science, Wildlife, Fish, and Conservation Biology *June 2018*