Vanessa Isabel Roque

viroque19@gmail.com | 330 730 9139 | linkedin.com/in/vanessairoque | github.com/vroque19

EDUCATION

California State University, Fullerton   Graduation Date: **May 2025**
B.S/M.S Computer Engineering, Computer Science Minor   GPA:**3.6**

Korea University | Seoul, South Korea   **Fall 2023**
Study Abroad Reciprocal Exchange Program
Attended one of South Korea's most prestigious universities to cultivate a global perspective through an immersive cultural experience.

Relevant Coursework: Data Structures, Algorithms, Object-Oriented Programming, Databases, Operating Systems, Computer Networks, Embedded Systems, Computer Architecture, Real-Time Audio Processing, Signals and Systems, Electronic Circuits, Linear Algebra and Differential Equations, Multivariate Calculus

EXPERIENCE

CALIFORNIA STATE UNIVERSITY, FULLERTON | Supplemental Instructor   **January 2023 - Present**
- Guide Calculus III students through complex topics by hosting bi-weekly collaborative study sessions.
- Prepare relevant study materials to enhance student understanding, boosting students' grades by 10%.

ROSENDIN ELECRTIC CO. | Electrical Engineering Intern   **June 2024 - August 2024**
- Developed electrical designs and specifications for power, lighting, and control systems in Autodesk Revit.
- Used Visual Lighting to create comprehensive lighting designs for commercial buildings and perform photometric analysis to ensure standards for brightness, intensity and energy efficiency are met.
- Conducted QA QC in Bluebeam to identify potential issues in schedules, single line diagrams, and drawings.
- Attended site visits to inspect the installation of electrical components such as conduits, transformers, and fixtures.

SUMMER UNDERGRADUATE RESEARCH ACADEMY | Researcher   **June 2024 - August 2024**
- Investigated various wireless power transfer technologies and identified magnetic resonance as an improvement to current inductive technologies and a potential future trend for electric vehicles.
- Built and tested a small-scale LLC resonant converter, collaborating with my research partner. We identified optimal tuning to improve charging efficiency and minimize interference from other devices.
- Presented our work at the SUReA conference at California State University, Fullerton.

PROJECTS

SMART SLEEP HUB   **Fall 2024 - Present**
- Designed and developed a device that promotes a healthy sleep environment by regulating light exposure and recording sleep data via light, motion, and temperature sensors.
- Interfaced a Raspberry Pi 5 with a touchcscreen to display a clock, enable sleep configuration, and view their sleep data. Developed the UI using SvelteKit, Javascript, TailwindCSS, and Vite.
- Integrated Philips Hue RESTful API that allows the hub to control bedroom light color and intensity.
- Conducting tests in a team to ensure seamless integration of software and hardware.

RECIPE KEEPER IOS APP   **Fall 2024 - Present**
- Developed an IOS app to simplify recipe management so creating, updating and viewing recipes can be effortless.
- Designed a user-friendly interface using SwiftUI to enhance user experience and ensure seamless navigation.

EXTRACURRICULARS

ASSOCIATION FOR COMPUTING MACHINERY | Board Member   **2022 - present**
- Organize workshops that explored the boundaries of artificial intelligence, ensuring accessibility for participants.

ENGINEERING DESIGN CLUB | Member   **2022 - present**
- Circuit and program Adafruit Feather RP2040 RFM69 in CircuitPython for 3D printed Pokeball last semester
- Gain experience in soldering, 3D printing, solidworks, and PCB by attending hands-on workshops.

Skills: Python, C/C++, HTML, Javascript, TailwindCSS, MySQL, SwiftUI, SvelteKit
Tools: VS Code, Git, GitHub, XCode, Code Composer Studio