Zelan Eroz Espanto

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EDUCATION

Case Western Reserve University | GPA: 3.8   **Expected May 2028**
Bachelor of Science in Computer Science, Minor in Mathematics   Cleveland, OH
Coursework: Data Structures, Algorithms, Multivariable Calculus, Discrete Mathematics, Linear Algebra, Statistics
Awards: Point Wells Fargo Scholarship, United World College Davis Scholarship, Dean's High Honors List

TECHNICAL SKILLS

Languages: Python, SQL, HTML, CSS, React, TypeScript, JavaScript, R
Libraries or Frameworks: AWS, React, Flask, Node.js, TensorFlow, PyTorch, OpenCV, NLTK, Microsoft Azure
Tools: Figma, Adobe XD, Sketch, Webflow, Framer, Git, GitHub, Visual Studio Code, Mira, Jira, Expo, Firebase

EXPERIENCE

Eskwelabs   **July 2025 – Present**
Education Innovation Fellowship Intern   Philippines
- Led the development of a fully automated AI assessment generation tool by converting a manual prompt chain into a scalable workflow with a user-friendly interface, streamlining content creation for educators at Eskwelabs

Department of Computer Science and Data Science   **January 2025 – Present**
Teaching Assistant for CSDS 233: Introduction to Data Structures (Java)   Cleveland, OH
- Served as the youngest and sole first-year TA in the university, supporting 150+ students in the department's largest course; delivered 100 hours of instruction, office hours, and exam support throughout the semester
- Reduced grading time by a week by developing automated Java test scripts and reusable rubric templates to streamline weekly code submission evaluation for staff

Beats by Dre   **November 2024 – May 2025**
Consumer Insights and Data Analytics Extern   *Remote*
- Extracted key consumer pain points and feature preferences by applying sentiment analysis, EDA, and NLP techniques (TextBlob, NLTK, Gemini AI) to 2,000+ Beats Studio Buds product reviews, enabling data-driven insights for product marketing and potential redesign decisions

Fish2Meta and Neurocybernetics Laboratory (Chubu University)   **September 2022 – March 2024**
Pioneering Research Intern   *Japan*
- Developed a custom Python pipeline to automate data extraction, cleaning, and visualization—cutting manual processing time by 70% and, enabling consistent weekly analytics data-driven insights for the research team.
- Contributed to research on prism adaptation and cerebellar error correction by developing experimental protocols with 40+ participants and coordinating team hypotheses and task execution.

LEADERSHIP & ACTIVITIES

Microsoft   **July 2025 – Present**
Emerging Leaders for College Students Program (ELCSP)   Remote
- Selected from a pool of 1300 applicants, ELCSP is Microsoft Security's signature summer initiative designed to shape the next generation of inclusive, purpose-driven leaders—not just for Microsoft, but for the tech industry.

Association of Computing Machinery - Women   **January 2025 – Present**
Marketing Chair   Cleveland, OH
- Launched digital media branding system, content calendar, and attendance incentive scheme that boosted engagement and doubled participation across tech and outreach events

PROJECTS

LSTM-based Forecasting Model for Sea Surface Temperature Anomalies | PyTorch
- Captured spatial and temporal dependencies in climate signals using multivariate sequence modeling, engineered lag features, and applied sliding windows for dynamic time-step alignment
- Analyzed long-term trends linking elevated SSTAs to typhoon intensification patterns, supporting early-warning systems and regional disaster mitigation planning

Fantasy F1 Optimizer| Python, XGBoost, Optuna, Next.js, Firebase, FastF1 API
- Developing a fantasy Formula One optimizer by scraping historical race and weather data, training XGBoost models to predict driver performance, and deploying a full-stack app with a constraint-based solver and automated MLOps pipeline for real-time fantasy lineup recommendations

Baybai | Python, KivyMD, Flask, SQLite
- Built a mobile app to teach Baybayin, an endangered pre-colonial Filipino script, through interactive tracing, translation, and quiz modules; deployed in a public high school, reaching 90 students.