

# ZELAN EROZ ESPANTO

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## EDUCATION

### CASE WESTERN RESERVE UNIVERSITY (UWC Davis Scholar)

B.S. Computer Science; Minors in Mathematics and Economics

Relevant Coursework: Data Structures & Algorithms, Calculus II, Macroeconomics, Chemistry, Journalism & Digital Disruption

Cleveland, OH

Aug 2024-Present

### United World College (UWC) ISAK JAPAN

International Baccalaureate Diploma (Grade 11 & 12)

Grade: 40/45 (~90th percentile globally)

Karuizawa, JP

Aug 2022 - May 2024

## SKILLS SUMMARY

Languages	<b>Proficient:</b> Python, Java, SQL, LaTeX <b>Experience:</b> MATLAB, HTML, CSS, React, JavaScript, LabVIEW
Frameworks	OpenCV, Keras, Pytorch, HuggingFace, Seaborn, Pandas, NumPy, Scikit-Learn, Matplotlib
Tools	Excel, MS Office, Visual Studio Code, IntelliJ IDEA, Git, Jupyter Notebook (Anaconda), PyCharm

## RELEVANT EXPERIENCE

### Data Engineer

Oct 2024 – Present

Pythia

Cleveland, OH

- Develops with PyTorch to contribute to the creation and management of datasets for research, supporting Pythia's platform for market analysis and trading model development across across stocks, bonds, and other asset classes.

### ThinkImpact Fellow

Sep 2024 – Present

Weatherhead School of Management

Cleveland, OH

- Selected as the only freshman in a competitive fellowship to lead an education initiative in the Philippines, conducting market research with over 500 students and educators across 20 schools to improve access to learning and college resources.

### Data Analyst & Trainer

Sep 2022 – Jan 2024

Fish2Meta & Chubu University

Karuizawa & Nagoya, JP

- Developed Python source code using OpenCV and Keras that converts whiteboard images of subjects' results into numerical data points, automating data extraction, cleaning, and visualization, significantly reducing generation time by 50% and ensuring consistent and accurate reporting for weekly updates.
- Recruited and trained 4 new researchers, enhancing team efficiency through workshops in research design and Python using Jupyter.

### Web Developer, VP, and Clubs & Activities Representative

Sep 2019 – Dec 2023

Student Council

Karuizawa, JP & Butuan City, PH

- Oversaw 71 clubs, driving a 25% increase in student participation through revamped "club hopping" events and workshops.
- Co-developed a web-based platform to digitize club inventory and attendance, improving accessibility and efficiency

## PROJECTS & AWARDS

### BayBai: A Mobile App for Learning a Lost Filipino Script

- Developed with Python, KivyMD, Flask, and SQL; embedded flashcards, a spaced repetition algorithm, a translator feature, and a social networking platform for collective learning.

### Research: Comparison of Stochastic and Deterministic Approaches for EEG Signal Denoising

- Conducted research comparing stochastic and deterministic algorithms for EEG signal denoising, achieving a 20% improvement in artifact removal accuracy; an A-graded Extended Essay (31/34 marks) in the IB Diploma.

**Relevant Awards:** Youth Excellence in Science Award (National), Philippine Science High School Scholar (6% admit rate), 1st Place Development Economics Conference of Ateneo (National)