



# ZACHARY BRENT L. MAYUGA

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## SUMMARY

A Computer Engineering graduate from De La Salle University with a keen interest in pursuing a career as an software developer. Demonstrates a strong foundation in engineering principles, a versatile skill set, and the adaptability to excel in dynamic work environments. Known for a positive and proactive attitude, combined with a commitment to continuous learning and innovation in the field of artificial intelligence and software development.

## WORK EXPERIENCE

**Events Officer, Association For Computer Engineers**

Sep 2023 - Dec 2024

- Served as Events Officer in the organization, leading the coordination of academic talks in computer engineering.
- Collaborated with speakers and stakeholders to ensure the success of technical and academic discussions.
- Contributed to the professional development of members through relevant academic initiatives.

**Intern|Software Developer, Essilor Luxottica**

May 2024 - Sep 2024

- Completed an internship at Essilor Luxottica as a software developer, focusing on building user-friendly applications.
- Gained hands-on experience in React, contributing to the development of interactive and efficient software solutions
- Collaborated with a team to implement responsive design and improve application performance.

**AI Developer, Flipside AI**

Jan 2025 - Apr 2025

- Integrated AI chatbots to the front end.
- Fine-tuned prompts to receive the desired outputs from the LLM Models.

## EDUCATION

**Bachelor's Degree in Computer Engineering**

Feb 2025

- De La Salle University Manila**
- Consistent Dean's Lister
  - Thesis on "Development of an Automated Scoring System in Ball Sports using CNN from a Virtual Simulation"
  - Attended the 5th AI Expo Autumn Tokyo in Makuhari Messe, Japan

**Stem Qualifier**

May 2020

- Las Pinas City National Science Highschool
- Finished with High Honors
  - President of the Science Club
  - Exemplary Award in Robotics and Programming

## TECHNICAL SKILLS

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### Computer Vision

- Image processing
- Frameworks: OpenCV, TensorFlow, PyTorch, Keras
- Tools: YOLO

### Natural Language Processing (NLP)

- Frameworks: TensorFlow, PyTorch
- Tools: OpenAI GPT models, IBM Watson Language Translator

### Generative AI

- Models: GANs (Generative Adversarial Networks), VAEs (Variational Autoencoders).
- Tools: DALL·E

### Machine Learning

- Data Prediction
- Data Analyzation
- Data Annotation
- Model Training
- Model Optimization

### Web Development

- ReactJS
- Typescript
- Node.js
- Tailwind CSS
- CoreMedia CMS
- MongoDB

## PROJECTS

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### Bot Deveolpment (Discord)

- Integration of diverse programming solutions through the utilization of APIs
- Incorporating advanced personalized AI into the bot to interface with an organization's database.

### Development of an Automated Scoring System in Basketball using Convolutional Neural Network (CNN) from a Virtual Simulation (Thesis Study)

- Successfully developed an automated scoring system capable of detecting and tracking basketball scoring events in a virtual simulation environment.
- The system showcases real-time performance with high accuracy, enhancing the reliability of basketball simulations.

### Zombie vs Knights

- Developed a simple turn-based video game using Java's Scenebuilder showing a great understanding of Object-Oriented Programming and Data Structures.

### Pokemon Personality Quiz

- A fun React web app that reveals your inner Pokémon type based on your personality.
- The web app is mobile responsive.

## PROGRAMMING LANGUAGE

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- Python
- Matlab
- Java
- C and C++
- Javascript, HTML, CSS
- HDLs (Verilog and VHDL)