GABRIELA M. BALISACAN

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GitHub: ichiyan ◆ Portfolio: https://ichiyan.github.io/dev-portfolio/

With a solid foundation in data science and full-stack web development, I am passionate about tackling complex real-world challenges through innovative and impactful tech and data-driven solutions. My strong analytical, technical, problem-solving, and collaborative skills, coupled with my adaptability, keen attention to detail, and commitment to quality, enable me to deliver exceptional results, even in fast-paced environments and with minimal supervision. Dedicated to continuous learning and growth, I strive to further refine my skills while contributing to meaningful projects.

⚙️ TECHNICAL PROFICIENCIES

Data Science and Analytics	Python, NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, PyTorch, HuggingFace, BeautifulSoup, Selenium, Google Colab, Paperspace
Web Development	HTML, CSS, Sass, JavaScript, TypeScript, PHP, SQL, ReactJS, Laravel, Python, Django, Java, Java Spring Boot, Java Hibernate, Kafka, Celery, Redis, MySQL, Dbeaver, DataGrip
Mobile Development	Dart, Flutter, Android Studio
Other Languages/Technologies	C, Git, GitHub, Visual Studio Code, IntelliJ IDEA, Docker

💼 WORK EXPERIENCE

Software Engineer Intern — May 2023 - September 2023
Alliance Software Inc. — *Cebu City, Philippines*

- Worked on the front and back-end development of a web-based supply chain management system and e-commerce system using ReactJS, Java Spring, and MySQL
- Wrote SQL scripts for data fetching, merging, aggregating, and more to create reports
- Streamlined development processes by creating reusable components that could be shared across different parts of the application
- Optimized code performance by identifying bottlenecks and refactoring for improved efficiency

Software Developer — October 2021 - March 2022
Trent (subcontract) — *Remote*

- Implemented the front-end screens of a delivery service mobile application using Flutter and Android Studio
- Used the Google Maps API to track delivery riders' location

🎓 EDUCATION

Bachelor of Science in Computer Science — August 2019 - May 2023
University of San Carlos — *Cebu City, Philippines*

- *magna cum laude*
- *cum laude caroli sancti* (with high praise of San Carlos) for exhibiting academic competence and skills (Scientia), noble character (Virtus), and dedication to social transformation (Devotio)

Elementary to Senior High School (STEM) — June 2007 - March 2019
De La Salle Andres Soriano Memorial College — *Toledo City, Philippines*

- Valedictorian with High Honors (2013, 2019)

🔍 RESEARCH PUBLICATIONS

Neuro-Vis: Guided Complex Image Reconstruction from Brain Signals Using Multiple Semantic and Perceptual Controls

June 2024

DOI:10.1145/3661725.3661744   Project Showcase ↗

- Led the development of a novel deep learning model to reconstruct seen natural images from evoked human brain activity using **Python, PyTorch, NumPy, Scikit-learn, HuggingFace, Diffusers, BLIP, VDVAE**, etc.
- Given brain activity data, the model predicts (1) fine-grained image features that capture low-level details with high semantic fidelity, (2) depth maps and (3) color palettes to incorporate structural and color information in the human visual cortex, and (4) text embeddings to form realistic descriptions of the seen images. These predictions drive a modified diffusion-based generative model to reconstruct the seen images.
- Outperformed the state-of-the-art methods in terms of consistency in low-level features while also rivaling them in terms of semantics and also produced state-of-the-art image captioning results
- Presented the results during the 2024 International Conference on Computing, Machine Learning, and Data Science in Singapore and the presentation was awarded as the best among its track

🏆 KEY ACHIEVEMENTS

Best Presenter, International Conference on Computing, Machine Learning, and Data Science

April 2024
Bugis, Singapore

International Computing and Engineering Association (ICEA)

- Presented our deep learning research paper on brain decoding entitled "Neuro-Vis: Guided Complex Image Reconstruction from Brain Signals Using Multiple Semantic and Perceptual Controls"

8th Place, Nationwide Diliman Solutions Challenge

March 2021
Remote

Google Developers Student Club UP Diliman Chapter

- Ranked 8th out of 250 participants and top 30 teams with our proposal and prototype of a mobile application that instills financial literacy through a simulation visual novel-like game, stock market simulation, information corner, and forum

Best Capstone Project, STEM Fair

February 2019
Toledo City, Philippines

De La Salle Andres Soriano Memorial College

- Recognized as the best among 20 teams with our rover-type mine search and rescue robot prototype equipped with a first-person view camera, temperature and gas sensors, and mobile application

Best Research Project and Best Poster Presentation, Division Research Conference

February 2019
Toledo City, Philippines

Department of Education, Toledo City Division

- Emerged as the best out of more than 20 participating schools for our quantitative research project on the relationship among multiple intelligences, academic achievement, and 21st-century skills of grade 10 students
- Performed pilot testing, administered four sets of research instruments, and applied statistical tools or techniques such as proportion, weighted mean, and Chi-square

Research Presenter, De La Salle Philippines Academic and Cultural Fair

January 2019
Ozamiz City, Philippines

De La Salle Philippines

- Invited to present our quantitative research project on the relationship among multiple intelligences, academic achievement, and 21st-century skills of grade 10 students during the DLSP fair participated by all 16 La Salle schools