

Jayson C. Sepeda

sepedajayson01@gmail.com | 09303865907 | Github: jiejebureche | Manila, Philippines

Computer Science undergraduate with hands-on experience in Machine Learning, UI/UX, and full-stack web/app development. Recognized with Best Abstract Award at an international research conference. Strong foundation in GRU-based Speech Emotion Recognition, AppSheet automation, and UI/UX prototyping using Flutter and Figma.

Skills

- **Core Skills:** Machine Learning, Neural Networks, Deep Learning, Software Engineering, Cybersecurity Basics
- **Programming:** Python, Java, C++, C, Dart, PHP, HTML, CSS
- **Web/App Development:** Flask, Django, Laravel, Livewire, AppSheet, Looker Studio, MySQL, Tailwind CSS, Flutter
- **UI/UX & Tools:** Figma, Tkinter, Git, Google Apps Script
- **Soft Skills:** Analytical Thinking, Attention to Detail, Leadership, Time Management, Team Player

Key Achievements & Published Works

- **Best Abstract Award Winner** - 1st ASEAN Multidisciplinary Research Conference 2024 (International Society of Transdisciplinary Researchers, Educators, and Leaders Inc.)
- **Published Author** - *Enhancement of Gated Recurrent Unit for Speech Emotion Recognition in the Implementation of Voice-Based Danger Recognition System* (Published at United International Journal for Research & Technology, Indexed on Google Scholar and ResearchGate)
 - DOI: <http://dx.doi.org/10.13140/RG.2.2.21381.26085>

Experience

IT Intern | Third Generation Holdings Corporation

July 04, 2024 – August 20, 2024

- Designed and deployed dynamic dashboards and reports using **AppSheet** and **Looker Studio**, improving reporting efficiency.
- Automated document generation workflows via **Google Sheets** and **Apps Script**, reducing manual work by ~50%.
- Customized forms and backend workflows to streamline data input and retrieval processes.
- Provided IT support for hardware/software troubleshooting and issue resolution across departments.
- Conducted system evaluations and submitted structured defect reports to improve internal tools.

Projects

Enhancement of Gated Recurrent Unit for Speech Emotion Recognition in the Implementation of Voice-Based Danger Recognition System | Main Programmer

May 2024 – May 2025

Programming Language, Software & Framework: Python, Kaggle, Flask

- Built a GRU-based neural network to classify emotional states from speech signals using a custom Kaggle dataset.
- Improved model performance by identifying and solving three core issues in the base GRU model, applying tailored solutions to each.
- Developed a full-stack **Flask** web application that runs both the original and enhanced GRU models for real-time voice-based danger recognition.
- Designed preprocessing pipeline and data-splitting strategy to optimize model training and evaluation.
- Authored the research manuscript and prepared the system for academic publication and presentation.

KapehaNila | Project Lead & UI/UX

May 2025

Software: Figma

- **Led a cross-functional team** in the design and planning of a proposed café web app, coordinating all aspects of design, functionality, and deliverables.
- Facilitated regular **team meetings** to align on milestones, discuss feature implementations, and ensure team productivity.
- Designed the full UI for both mobile and desktop platforms using **Figma**, including wireframes, low-fidelity, and high-fidelity layouts.

- Built a fully interactive prototype for application review.
- Ensured **on-time delivery** of all project outputs including the manuscript, design assets, and supporting documentation.

PLM Archive System | Support Programmer and Documentation Lead *September 2024 – December 2024*
Language & Framework: Python, Django, MySQL

- Contributed to backend development using **Python, Django, and MySQL** for a university thesis repository system.
- Built reusable UI components for an intuitive user experience and system maintainability.
- Used **Git** for version control in a collaborative environment.
- Co-authored system documentation, including a user manual, project brochure, and presentation deck.

PrismViz | UI/UX *September 2024 – December 2024*
Software: Figma

- Designed a responsive, user-friendly interface for an online data cleaning platform tailored to simplify complex data management workflows.
- Created detailed wireframes along with low- and high-fidelity UI designs for both **desktop and mobile** platforms using **Figma**.
- Built interactive design prototypes to facilitate usability testing and team validation.
- Delivered complete project documentation, including the **user manual, brochure, and project manuscript**.

Mobile Application Development | UI/UX & Lead Frontend Developer *March 2024 – June 2024*
Software Development Kit & Programming Language: Flutter & Dart

- Led frontend development using **Flutter** and **Dart**, transforming Figma UI/UX designs into fully functional, responsive mobile applications.
- Developed **reusable UI components** to improve maintainability and scalability of the app codebase.
- Structured components to be easily **integrated by backend developers**, streamlining full-stack collaboration.
- Designed complete user interfaces in **Figma**, ensuring consistent, user-friendly layouts for both apps.
- Contributed to comprehensive documentation, including user manuals and promotional brochures.

Compiler Development | UI/UX & Support Programmer *September 2023 – June 2024*
Programming Language & Software: Python, Tkinter, Figma

- **Designed a custom programming language** and led the creation of its **Context-Free Grammar (CFG)**, serving as the foundational structure for syntax parsing and semantic analysis.
- Developed core compiler components including syntax analyzer and semantic output generator using **Python**.
- Created **reusable functions** to streamline lexical and syntax analysis processes, improving modularity and code clarity.
- Designed the compiler's graphical interface using **Tkinter** and prototyped UI flow with **Figma**.
- Authored technical documentation detailing the grammar rules, **First-Follow-Predict (FFP) sets**, and testing scripts.
- Participated in comprehensive testing and debugging phases to ensure correct and efficient code generation.

Academic Management System Web Development | UI/UX *September 2023 – June 2024*
Tech Stack & Software: Tailwind CSS, Alpine, Laravel, Livewire, Figma

- **Independently designed the entire user interface** of the Academic Management System (AMS) using **Figma**, including both low-fidelity and high-fidelity prototypes.
- **Collaborated closely with backend developers** to align UI design with system functionalities and technical requirements.
- Facilitated **team discussions** around process flows, feature design, and user experience to ensure seamless integration across modules.
- Used tools such as **Tailwind CSS, Laravel, Livewire, and Alpine.js** for design translation and development alignment.
- Authored system documentation, including a comprehensive **user manual** and **project brochure** for academic and stakeholder use.

Licenses and Certifications

UIJRT: Certificate of Publication <i>United International Journal for Research & Technology</i> <i>Skills: Machine Learning, Neural Networks, Deep Learning</i>	<i>December 2024</i>
ISTREL: Certificate of Presentation <i>International Society of Transdisciplinary Researchers, Educators, and Leaders Inc.</i> <i>Skills: Machine Learning, Neural Networks, Deep Learning</i>	<i>December 2024</i>
ISTREL: Best Abstract Award <i>International Society of Transdisciplinary Researchers, Educators, and Leaders Inc.</i> <i>Skills: Machine Learning, Neural Networks, Deep Learning</i>	<i>December 2024</i>
<i>Glitch in the Matrix: Unravel the Secrets of Software Quality Assurance</i> <i>Pamantasan ng Lungsod ng Maynila</i> <i>Skills: Software Quality Assurance</i>	<i>April 2024</i>
<i>U & I + X: Breaking Up with Bad Design</i> <i>Pamantasan ng Lungsod ng Maynila</i> <i>Skills: Essentials of UI/UX Design</i>	<i>November 2023</i>
Introduction to Cybersecurity <i>CISCO Networking Academy</i> <i>Skills: Explain the most common Cyber Threats, Attacks, and Vulnerabilities.</i>	<i>March 2023</i>
Cybersecurity Essentials <i>CISCO Networking Academy</i> <i>Skills: Describe the procedures used by cybercriminals and explain the purpose of laws related to cybersecurity.</i>	<i>April 2023</i>

Professional Reference

Bren Alfred España
Pamantasan ng Lungsod ng Maynila

- baespana24@gmail.com
- 09171388873
- Lecturer III / Professor
- Best time to call 3pm onwards

Education

Pamantasan ng Lungsod ng Maynila <i>Bachelor of Science in Computer Science GWA: 1.44</i>	<i>June 2021 - Present</i>
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