DAVID JOSHUA ESTRERA

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TECHNICAL SKILLS

AI & Automation: Machine Learning, Data Science, Power Automate, n8n, Zapier, AI Model Integration, Predictive Analytics

Data Analysis & Visualization: Power BI, SQL, DAX, Power Query, Data Modeling, Microsoft Excel

Programming Languages: Python, Java, JavaScript, C, C#, x86-64 Assembly

Data Technologies: Databricks, Supabase, Firebase, MongoDB

Frameworks & Tools: React, Node.js, Express, Git, RESTful APIs, Figma, Linux, VS Code

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PUBLICATIONS

Rule-Based Pattern Matching in an Automata and Formal Languages Course: Applications Towards Addressing the Sustainable Development Goals *Presented at the 2025 IEEE International Symposium on Technology and Society (ISTAS)* **https://doi.org/10.1109/ISTAS65609.2025.11269652**

Blind Bills: A Technological Approach to Increase Financial Inclusivity for Filipino Citizens *Presented at the 5th International Conference on Data Engineering and Communication Technology* **https://doi.org/10.1007/978-981-96-5214-3_4**

WORK EXPERIENCE

Technology, Education, Entertainment, Empathy, Design (TE3D) House, DLSU   **Sept 2023 - Dec 2025**
Research Associate

- Identified key research areas and designed innovative methods in human-computer interaction and AI applications, strengthening research depth and relevance

Procter & Gamble (P&G)   **May 2025 - Oct 2025**
SMO (Sales & Marketing Organization) IT AI Data Engineer Intern

- Designed and implemented end-to-end data pipelines using Databricks, integrating diverse data sources to feed directly into Power BI for real-time visualization and analytics.
- Developed interactive Power BI dashboards to visualize key metrics, enabling data-driven decision-making for cross-functional teams.
- Collaborated with teams to develop AI/ML & LLM models that optimized business processes and provided actionable insights for strategic decision-making.
- Leveraged cloud-based technologies and big data tools to process and analyze large datasets, driving efficiency and innovation within the SMO IT function.

Center for Human-Computer Innovations (CeHCI), DLSU   **Aug 2024 - Nov 2024**
Research Associate

- Developed a computer vision application for the visually impaired using OpenCV and Machine Learning, enhancing accessibility and user independence
- Presented the accessible computer vision application for the visually impaired at an international conference, leading to a published paper on its development and impact

Willis Towers Watson (WTW)   June 2024 - Dec 2024
RTS Technology Developer Intern

- Developed a progress tracking system, increasing employee engagement by 50% by facilitating clear reporting metrics.
- Integrated Power BI for real-time data visualization, enhancing data-driven decision-making with intuitive, dynamic dashboards.
- Automated offboarding reminders with Power Automate, ensuring compliance and prompt notifications through process efficiency.

Information Technology Services, DLSU   Sept 2023 - June 2024
Student Assistant and Resource Person

- Managed and updated student records using a Microsoft Visual FoxPro Application, improving data accuracy and accessibility
- Executed administrative support tasks, such as organizing materials and scheduling, ensuring smooth class operations

Freelance Developer   Sept 2022 - May 2024

- Designed and implemented software solutions across diverse projects, utilizing different languages and frameworks to meet client needs
- Enhanced software performance and stability through systematic debugging and issue resolution
- Engaged with clients on project planning, aligning solutions with business objectives

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PROJECTS

Employee Time In/Out System
- Developed a payroll recording system for an environmental enterprise using Supabase and Nuxt 3, optimizing workforce tracking and payroll processing.

PawfectPairs: Dating App for Dog Owners
- Created a pet-centric social networking app using MongoDB, Node, and EJS to foster community engagement.

Inventory and Payment Tracking System
- Built a system for a bike company with React, Node, and MongoDB, enhancing inventory accuracy and operational efficiency.

HodlHub – Android Trading Portfolio Tracker
- Developed in Kotlin using Android Studio; features an OpenAI trading chatbot, CoinGecko API for crypto data, and Supabase for backend and auth.

EDUCATION

Bachelor of Science (Honors) in Computer Science Minor in Data Science and Master of Science in Computer Science   April 2026
De La Salle University
- Dean's Lister

Senior High School (STEM)   2021
Quezon City Science High School
- High Honors
- Capstone Project: Bioelectricity

Junior High School   2019
Quezon City Science High School
- Honors