Jacob Lawrence Alfante

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| https://jacobalf.github.io/Resume/

Education

Colegio De Muntinlupa — Sucat, Muntinlupa
Bachelor of Science in Computer Engineering — *2022 – Present*

- Relevant Coursework:
  - Object-Oriented Programming
  - Data Structures and Algorithms
  - Computer Networks and Security
  - Microprocessors
  - Logic Circuit and Design
  - Database Management Systems

Olivarez College — Dr. Santos Avenue, Parañaque
Science, Technology, Engineering, and Mathematics Strand (STEM) — *2020 – 2022*

Skills

- **Programming Languages:** Experience in C/C++ (Microcontroller Focused), Java, HTML, CSS, JavaScript, PHP, MySQL
- **Engineering Software:** Proteus, Arduino IDE, ModelSim, EagleCAD, SolidWorks
- **Productivity Software:** Microsoft Excel, Word, PowerPoint, Canva, Figma
- **Hardware:** Microcontrollers (Arduino and ESP32), electronic circuit design, sensor integration
- **Soft Skills:** Critical thinking, problem-solving, adaptability under pressure, strong work ethic, continuous learning mindset

Projects

MAFI - Clothing Catalogue Website

- Developed a responsive web application with a team featuring product browsing, advanced search/filtering capabilities, and user wishlist functionality for an enhanced shopping experience
- Implemented user authentication and secure login system to manage personalized product viewing experiences

Enhanced Request Management System

- Developed a database-driven inventory management system for the General Services Office of Colegio de Muntinlupa using HTML, CSS, Javascript, and PHP MySQL together with other team members

- Implemented advanced search functionality, sorting, and filtering capabilities to enhance user efficiency

Fleet Management System

- Developed a digital solution with a team to replace a manual vehicle maintenance and repair tracking system for the Mechanic Department in Muntinlupa City
- Implemented automated reminders using Google Calendar and utilized Google Sheets/Excel to streamline operations, reduce errors, and improve maintenance efficiency, ultimately extending vehicle lifespans and enhancing service delivery.

Personal Project - Website Profile

- A simple personal website created for displaying personality
- Website is deployed on GitHub
- Developed using HTML and CSS

Portable Room Air Quality Monitoring System With Real-Time Display and Automatic Humidifier

- Developed an IoT-based environmental monitoring system using ESP32 microcontroller, DHT11 and MQ135 sensors to track temperature, humidity, and air pollutant levels with real-time display via LCD and remote monitoring through Blynk cloud platform, featuring automatic humidifier control for air quality optimization.

Digital Door Lock System using Integrated Circuit Logic Gates

- Designed and implemented a secure digital door lock system using discrete IC logic gates (AND, OR, NOT, NAND, NOR) without the use of any microcontroller
- Enabled 4-digit passcode input via DIP switch and LED indicators for visual feedback

Arduino LED Shield

- An LED shield created in EagleCAD
- Worked with other team members in designing the layout and fabricating it into a printable circuit board

Academic Achievements

Academic Excellence Award: Dean's Lister - 1st Year College (1st Semester)
Academic Excellence Award: Dean's Lister - 1st Year College (2nd Semester)
Academic Achievement: Academic Citation - Grade 12 (STEM)
Academic Achievement: With Honors - Grade 11 (STEM)
Regional School Press Conference Sportswriting: Qualifier and Participant (S.Y. 2019 - 2020)
Division School Press Conference Sportswriting: 3rd Place Overall (S.Y. 2019 - 2020)

Affiliations

ICPEP.se - Colegio de Muntinlupa: Student Member
Computer Engineering Society: Former Logistics Committee Member (2023)