Aya Lakkis | Software Engineering

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PROFESSIONAL SUMMARY

A highly motivated and collaborative Software Engineering student with a passion for building efficient and user-centric full-stack applications. Currently gaining hands-on experience in the development of robust solutions. My solid foundation in C++, Python, Java, C#, and JavaScript, coupled with practical experience in a variety of modern frameworks, allows me to tackle complex problems and contribute effectively to development teams. I am dedicated to continuous learning and eager to leverage my diverse skill set to create innovative software solutions.

SKILLS

- **Programming Languages:** JavaScript, Python, C++, HTML, CSS, SQL, Java, C#

- **Frameworks & Libraries:** Laravel, Ionic, React, Angular, Express.js, .NET (ASP.NET Core/WPF), Entity Framework Core, NumPy, TensorFlow/Keras

- **Databases:** MongoDB, MySQL, PostgreSQL, SQL/SQLite

- **AI/ML/Computer Vision:** OpenCV/JavaCV, Biometric Recognition, Convolutional Neural Networks (CNN), Minimax Algorithm (Alpha-Beta Pruning)

- **Concepts & Tools:** Git, Role-Based Access Control (RBAC), Payment Gateway Integration, Inventory & POS Systems, Adobe Photoshop, Adobe Illustrator

PROFESSIONAL EXPERIENCE

Networking & Quality Assurance Specialist | SpeedNet Tech
Jan 2023 - December 2025
- Managed and maintained network infrastructure to ensure consistent internet distribution quality and reliability for customers.
- Conducted rigorous quality assurance (QA) checks on network services and hardware, identifying and resolving connectivity issues.
- Applied technical knowledge to diagnose and troubleshoot complex networking problems, improving overall service uptime and customer satisfaction.

Full-stack Intern | Talentech Company
May 2025 - August 2025
- Contributed to the development of a full-stack application, utilizing the Ionic framework for the front-end and Laravel for the back-end.

- Collaborated with senior developers to design and implement new features, ensuring code quality and adherence to project specifications.

- Assisted in debugging and optimizing the existing codebase to improve application performance and stability.

ACADEMIC AND PERSONAL PROJECTS

- **Full-Stack Money Transfer Application (Laravel/MySQL)**
  - Engineered a secure, full-stack money transfer application with distinct User, Agent, and Admin roles, demonstrating proficiency in Role-Based Access Control (RBAC).

  - Developed the backend using Laravel (PHP) to manage complex transaction logic, secure API endpoints, and calculate dynamic agent commissions and service fees.

  - Implemented a relational database (MySQL) schema to ensure data integrity and ACID compliance for all financial transactions.

- **AI Person Identification System (Java/OpenCV)**
  - Designed and built an AI-powered person identification system in Java, utilizing the JavaCV library for computer vision.

  - Implemented a biometric recognition pipeline encompassing Face Detection and Face Recognition (e.g., LBPH) to compare live or captured images against a secure database of known individuals.

  - Demonstrates expertise in Java application development and integrating machine learning models into practical software solutions.

- **Full Point of Sale (POS) System (.NET/SQL Server)**
  - Created a comprehensive, full-featured Point of Sale (POS) system using the C#.NET framework with distinct Agent (Cashier) and Admin back-office interfaces.

  - Utilized Entity Framework Core for seamless data management with a robust SQL

Server database, handling complex operations like real-time Inventory Tracking, sales processing, and supplier management.

- Features include user/role management, discount/tax application, receipt generation, and detailed sales/inventory reporting.

- **AI Python NumPy Project: Plant Disease Detection**
  - Built a Plant Disease Detection system using Python and deep learning techniques.

  - The core of the system is a Convolutional Neural Network (CNN) model (built with TensorFlow/Keras) trained to classify and diagnose diseases from images of plant leaves.

  - Leveraged NumPy for efficient array manipulation and processing of high-dimensional image datasets during model training.

- **Python AI Chess Game**
  - Created an AI Chess Game in Python with an AI engine powered by the Minimax algorithm and Alpha-Beta Pruning for efficient strategic move selection.

  - Implemented full game history tracking, enabling the system to accurately enforce complex chess rules such as the detection of threefold repetition and the 50-move rule for automatic draws.

EDUCATION

Software Engineering | Antonine University
2022 - Present
- Currently pursuing a degree in Software Engineering, building a strong academic foundation in programming principles and the software development lifecycle.

Web Development Bootcamp | Coverse Technologies Company
3 Months
- Completed an intensive full-stack bootcamp, developing dynamic web applications and gaining practical skills in modern web technologies.

CERTIFICATIONS & TRAINING
- Artificial Intelligence From A to Z | Udemy Academy (15 hrs)

- Bug Hunter | Ridox Center (85 hrs)