ALVIN HANDOKO

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https://alvinvh.github.io/alvins-page/

SOFTWARE DEVELOPER PROFILE:

- Master of IT (Software Engineering) graduate of Charles Darwin University with strong skills in Front-end Development, Back-end Development, Software Testing, Algorithms, Databases, and Machine Learning.
- Proficient in Python, C#, AngularJS, TypeScript, JavaScript, HTML, CSS, SQL, Flask, Django, and FastAPI for front-end development and back-end development during my final year project, coding competition project, and placement project.
- Completed key projects, including "*Improving Sustainability Using Image Processing Techniques*", which included developing a user-friendly application that raises awareness within communities about recyclable materials and encourages recycling, and "*Telemedicare*", which included developing a virtual healthcare application that ensures all Territorians can access medical services anytime and anywhere through video consultations.

KEY SOFTWARE DEVELOPMENT SKILLS:

- **Programming Languages:** Python, C#, JavaScript, CSS, SQL
- **Front-end Development:** Experience in using AngularJS, React, JavaScript, HTML, CSS, Bootstrap, and Figma for front-end UI/UX design to develop web applications including WasteAI and Telemedicare in my final year project .
- **Back-end Development:** Skilled in Python, C#, Django, MySQL, and FastAPI to perform developed API for WasteAI and Telemedicare during my final year project.
- **Data Structures**: Experience in preparing data frames for machine learning such as handling missing value, normalization, augmentation, and label encoding using Pandas library.
- **Machine Learning**: Skilled in implementing multiple machine learning algorithms such as YOLO, Linear Regression, and CNN for WasteAI model and using tools such as TensorFlow, Ultralytics, and PyTorch.
- **Software Testing:** Experience in using Pytest, Robot Framework, OWASP ZAP, Burp Suite, and Metasploit to ensure the functionality and security of the WasteAI and Telemedicare for my final year project.
- **Version Control:** Experience in using Git and Github to manage version control, collaborative development, and consistently utilized it across all projects including my internship.
- **Technical Writing & Documentation:** Experience in writing code documentation and process guide for my internship and during university projects.

QUALIFICATIONS & CERTIFICATIONS:

- **CompTIA A+ -** CompTIA, completed January 2025
- **Master of IT Software Engineering –** Charles Darwin University, 2024
- **Bachelor of IT Network Security –** TAFE NSW, 2022

PROFESSIONAL EXPERIENCE

SOFTWARE ENGINEER INTERNSHIP, DATA ENGINEERING PTY LTD, PERTH WA, AUSTRALIA, APRIL 2025 – PRESENT

Responsibilities:

- Design a custom website for clients which include UI of the website using Figma to ensure the design is met client's and manager's standard.
- Develop custom Odoo module website using JavaScript, HTML, SCSS, PostgreSQL and Python that include developing the front-end of the website, creating back-end logic, database integration, and comprehensive functional testing.
- Proactively develop and manage documentation about the application and participate in weekly meeting to showcase weekly milestone.

SOFTWARE DEVELOPER, MOTHER THERESA CATHOLIC SCHOOL, ZUCCOLI NT, AUSTRALIA, FEBRUARY – JUNE 2024

Responsibilities:

- Designed a game for primary school children that teaches kindness, created the animation, sprites, content, and UI of the game using Figma and Unity to ensure that the game is entertaining for children while successfully reach the project's goal.
- Assisted project manager to ensure the development progress met the client's expectations, including but not limited to scheduling meetings, preparing meeting materials, and ensuring all team members reach their weekly milestones.
- Developed applications using Unity, C#, and .NET, including developing the front-end of the game, creating logic and game systems, and executing functional testing on all features.
- Created documentation about the application to ensure that the next team will be able to develop further or add new games to the application.

SALESPERSON, JB HI-FI, OSBORNE PARK, AUSTRALIA, NOVEMBER 2023— PRESENT

Responsibilities:

- Provide customer service support to more than 100 customers weekly, including processing transactions, handling customer complaints, troubleshooting customer devices and processing refunds.
- Provide technical advice to customers about computers, modems, routers, computer peripherals, portable devices, audio-visual devices, and many more.
- Suggest and recommend products to customers according to their needs.
- Maintain quality of sales to ensure meeting the company's goals while solving customers' needs.

KEY IT PROJECTS:

PROJECT NAME: Remittance App (Data Engineering PTY LTD)

Objective: To develop a user-friendly website for a client that needing a platform for their business which is money transfer application. The application itself built using a custom module of Odoo version 17. The website let customer to signup, login, check history of the transactions, storing bank details, creating contact list, and sending money to the contact list. The application itself requires multiple APIs that needed to verify user's ID,

Banking services, google autocomplete address, and SMS service. All of these features integrated by creating a custom module in Odoo that written in Python and the front-end is using HTML, SCSS, and JavaScript that stored in XML format.

Key Tasks:

1. Designing a UI/UX for required web page using Figma.
2. Improving the current web page by giving ideas of what can be done and implement the changes.
3. Integrating required APIs to the backend of the website such as Strive, GoogleAPI, Monoova, and Twilio.
4. Develop and improve a responsive web page based on the Figma design using HTML, SCSS, Bootstrap, and JavaScript.
5. Developing database model that is integrated with Odoo using PostgreSQL.

Outcome: The project is still ongoing and being developed based on the requirements and manager's feedback. Currently, the backend processes such as APIs integration are mainly completed and frontend also 80% completed. The website contains multiple pages such as homepage, about page, user dashboard, transactions page, and more. This website are being developed as a custom module that later can be integrated with other Odoo modules to streamline processes.

PROJECT NAME: Improving Sustainability Using Image Processing Techniques - WasteAI

Objective: To develop a user-friendly application that raises community awareness about recyclable materials and encourages recycling. This application enables users to take a photo of their waste, automatically detecting and categorising recyclable materials such as metal, glass, plastic, paper, and cardboard. Additionally, it provides an estimation of the carbon emissions saved through recycling, helping communities understand its environmental impact.

Key Tasks:

1. Creating a proposal about the project that includes researching about recycling, writing a literature review and final report, and gap analysis.
2. Designing an application that is user-friendly for all ages using Figma by following the best practices for UI/UX design and creating a colour template that matches with Northern Territory colour.
3. Developing an AI model that is able to detect 5 categories of recyclable materials using YOLO and CNN algorithms
4. Designing and creating a database using MySQL and optimising the database by using normalization that includes multiple tables to store uploaded photos, user logins, and detected recyclable materials.
5. Developing a responsive web application that can be used on mobile devices or computers using AngularJS, HTML, CSS, and Bootstrap. That includes a login page, home page, uploading the waste photo, object detection result page, chart and carbon emissions calculation page, and achievements page.
6. Creating multiple APIs using FastAPI to provide required data to the front end of the application and to ensure communication between the front end and the database. These APIs include login API, AI object detection API, result API, and carbon emissions API.

Outcome: The project successfully developed a user-friendly mobile application that raises community awareness about recycling. Using AI-powered image recognition, the app allows users to take a photo of their waste, automatically detecting and categorizing recyclable materials. It also estimates carbon emissions saved through recycling, helping communities understand their environmental impact. The app effectively promotes sustainable waste management and increases recycling participation. Successfully improved the AI model from 10% accuracy to 95% accuracy and developed a responsive user-friendly web application that can be used from mobile phone or PC during the development period.

PROJECT NAME: TeleMediCare

Objective: To develop a virtual healthcare application that ensures all Territorians can access medical services anytime and anywhere through video consultations. This platform enables patients to connect with multiple doctors and specialists, securely store and manage their medical history and prescriptions, also schedule appointments efficiently.

Key Tasks:

1. Designing the front end of the web application using Figma, which includes multiple web pages and adheres to the best practices of UI/UX industry standards. Additionally, ensure a design suitable for medium to low-speed internet connectivity in remote communities.
2. Developing the front end of the web application using AngularJS and Bootstrap, which comprises several pages such as the login page, homepage, appointment page, patient and doctor dashboards, and the doctor list page.
3. Conducting functional tests to verify the web application's functionality and assisting in performance testing for the API with JMeter, making necessary changes as required.
4. Assisting in the development of the back end of the web application using .NET, which features multiple APIs for logins, doctor appointment availability, and patient and doctor profiles.
5. Creating a presentation to showcase our application during the competition and delivering it to the judges.
6. Managed code versioning and team collaboration using Git to ensure seamless development and integration.

Outcome: The project successfully developed a virtual healthcare application that provides Territorians with seamless access to medical services anytime, anywhere. The platform enables patients to connect with multiple doctors and specialists via video consultations, securely manage their medical history and prescriptions, and schedule appointments efficiently. This solution enhances healthcare accessibility and convenience for users across the region.