



Audya Florencia

Undergraduate Computer Science Student

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ABOUT ME

A dedicated Computer Science student specializing in Artificial Intelligence, eager to apply theoretical knowledge and problem-solving skills to real-world challenges. Passionate about leveraging technology to innovate and contribute to dynamic teams. A quick learner with a strong foundation in computational principles and a keen interest in continuous growth within the tech industry.

EDUCATION

2018 - 2020 **SMP CITRA KASIH**

2020 - 2023 **SMA KRISTEN KASIH KEMULIAAN**

2023 - 2027 **BINA NUSANTARA UNIVERSITY | BACHELOR OF COMPUTER SCIENCE**

During my Bachelor of Computer Science degree at BINUS University, I developed a comprehensive understanding of fundamental computer science principles, maintaining a current GPA of 3.77. My curriculum provided a robust foundation in core areas essential for modern technological landscapes. I then specialized in Artificial Intelligence, delving into the theoretical concepts and practical applications of this rapidly evolving field. This specialization equipped me with the knowledge to approach complex computational problems.

WORK EXPERIENCE

May 2023 - Aug 2023 **PT. FITURE TEKNOLOGI INDONESIA | PROGRAMMER INTERN**

- Contributed to the enhancement of the company's project management system by implementing improvements using Laravel and PHP technologies.
- Actively engaged in learning and applying fundamental programming algorithms to optimize code efficiency.
- Gained practical experience and a solid understanding of Object-Oriented Programming (OOP) concepts through hands-on development tasks.

VOLUNTEER EXPERIENCE

- **Disney Meal Packaging**

Assisted in packaging meals for distributions to those in need

- **Character Building Education**

Taught lessons on 'Anti-Corruption Character' development to junior high school students

- **Biopore Innovation - Sustainable Solution for Water and Waste Management**

Participated in an initiative focused on sustainable solutions for water and waste management through biopore innovation.

EXTRACURRICULAR ACTIVITIES AND COMPETITIONS

- **Technoscape Hackathon 8.0 (Hack the Horizon: Redefining Boundaries with Code)**

Collaborated in a team to brainstorm and implement technology-driven ideas.

- **INC (International Coding Competition)**

Participated in a coding competition where teams were evaluated based on the number of solved programming challenges.

- **Youth Today x Join AIESEC Delegate**

Participated as a delegate in "Youth Today x Join AIESEC" event with the theme "Wield the Waves with AIESEC in BINUS."

SKILLS

- Programming Languages: Python, Java, C++
- AI: Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Data Preprocessing, Model Training, Model Evaluation
- ML Frameworks & Libraries: TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, NumPy, Matplotlib/Seaborn (for data visualization)
- Web Development: Flask, HTML, CSS, JavaScript, React
- Tools & Version Control: Git, GitHub
- Operating Systems: Windows
- Soft Skills: Problem-Solving, Critical Thinking, Communication, Teamwork, Adaptability, Time Management
- Languages: English (fluent), Indonesia (native)

PORTFOLIO

 Github Portfolio Link: <https://github.com/audyafloreciaa>

Project 1: WeatherZen - Smart, real-time weather insights

- Description: This project is a web application that provides real-time weather information and future predictions for any city you search. It's built to be easy to use and understand, showing you both current conditions and what to expect in the next five hours. This project combines getting data from the internet, using AI to make predictions, and displaying it all on a website.
- Key technologies used: This web application leverages Python as its core programming language, with Flask serving as the framework for its intuitive web-based interface. The project integrates APIs to fetch real-time weather and air quality data, while an Artificial Intelligence model (Random Forest Regressor), trained on historical data, powers the 5-hour weather predictions. The user-friendly front-end is built using standard web technologies including HTML, CSS, and JavaScript to display current conditions and interactive forecast charts.
- Specific Contributions:
 - Designed and implemented the Machine Learning model architecture and core backend workflow.
 - Developed and integrated the AI prediction model (Random Forest Regressor) for 5-hour weather forecasts.
 - Responsible for end-to-end data pipeline, including real-time data acquisition (from WeatherAPI), preprocessing (handling outliers, duplicates, missing values), and normalization.
 - Built the Flask backend logic to connect the AI model with the web interface, managing data input and prediction output.

Project 2: AttendSnap - Snap, recognize, log presence

- Description: This project is a real-time face recognition system designed for attendance tracking. It uses a webcam to detect faces, recognize individuals, and automatically log their attendance. The system is built with a custom-trained Artificial Intelligence model, making it a smart and automated way to manage presence.
- Key technologies used: This face recognition attendance system is primarily built using Python, leveraging powerful Computer Vision libraries (OpenCV) for real-time webcam video processing, face detection, and visual feedback. The core identification functionality is driven by Deep Learning frameworks (specialized face recognition libraries Dlib), which handle the training for accurate facial recognition and subsequent identification with high confidence. Furthermore, a data handling library (Pandas) is integrated to manage and automatically log attendance data directly into an Excel file.
- Specific Contributions:
 - Developed and implemented the user registration module, including webcam face capture and automated image acquisition for model training.
 - Built the real-time face recognition core, enabling continuous scanning and identification of registered individuals.
 - Designed and coded the automated attendance logging mechanism to an Excel file, ensuring high-confidence recognition and continuous detection before logging.
 - Integrated the time-based attendance feature to prevent duplicate entries within a defined period.

Project 3: ExploreID - Your Indonesian cultural travel planner

- Description: ExploreID is a comprehensive web application designed to help users discover and plan travel experiences across Indonesia, with a special focus on Bali. It provides detailed information on various destinations, allows users to manage their favorite spots, generates personalized itineraries using AI, and facilitates connections with local tour guides. The application emphasizes a smooth user experience through interactive filters, dynamic content loading, and a responsive, animated user interface for seamless travel planning.
- Key technologies used: The frontend of ExploreID is primarily built using Next.js, a powerful React framework, which enables the creation of fast and interactive user interfaces, manages application state, and handles dynamic content display. The project also integrates an Artificial Intelligence service specifically for its recommendation system, enhancing user discovery of relevant destinations. Furthermore, the local saving of favorite lists suggests browser-based local storage, and features like Google Maps ratings imply integration with relevant APIs for external data.
- Specific Contributions:
 - Developed the comprehensive web application frontend using Next.js.
 - Implemented key features.
 - Developed the itinerary generation feature.
 - Integrated the AI service for the recommendation system.

Project 4: SkipOrStick - Netflix Movie Review Sentiment Analysis

- Description: SkipOrStick is a web application designed to analyze the sentiment of Netflix show reviews. Users can input a Netflix show title and a review, and the system will classify the review as positive or negative with a confidence score. It also provides an overall recommendation for the show based on all submitted reviews, and can predict the show's potential success (Hit or Miss) if enough reviews are collected. This project showcases the use of Natural Language Processing (NLP) and machine learning for text classification within a user-friendly interface.

- Key technologies used: The SkipOrStick application primarily leverages Natural Language Processing (NLP) and Machine Learning techniques for sentiment analysis and text classification, implemented using Python with specialized libraries (Scikit-learn, NLTK). The user-friendly frontend interface is built with Streamlit, enabling rapid creation of the interactive web application. User-submitted reviews and classifications are managed with local storage, and the dynamic video background further enhances user engagement.
- Specific Contributions:
 - Designed and implemented the end-to-end NLP and Machine Learning pipeline for sentiment classification of Netflix show reviews.
 - Developed the core web application functionality.
 - Contributed to the user interface development.

Project 5: Detecting sickle cell gene mutations

- Description: This project explores the genetic basis of sickle cell anemia by analyzing the Human Beta Globin (HBB) gene sequence. It demonstrates key bioinformatics techniques, including DNA sequence manipulation, sequence alignment, and the application of a machine learning model to predict the presence of the sickle cell mutation (GAG to GTG) and its potential impact at the protein level. This project combines molecular biology concepts with computational analysis to provide insights into genetic disorders.
- Key technologies used: This project combines molecular biology with computational analysis using Python as the primary programming language. It heavily utilizes Bioinformatics libraries (Biopython) for handling FASTA DNA sequences, simulating genetic mutations, and performing complex sequence alignments using algorithms like Needleman-Wunsch and Smith-Waterman. For mutation detection, a Machine Learning model (Decision Tree Classifier) is implemented, leveraging data features like motif presence. Data visualization libraries are also employed to present insights into sequence features, alignment results, and model performance metrics.
- Specific Contributions:
 - Developed a comprehensive bioinformatics pipeline.
 - Implemented core bioinformatics techniques.
 - Applied and evaluated a Machine Learning model (Decision Tree Classifier).