Muhammad Rafi Isnaen

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EDUCATION

University of Bina Nusantara, Bachelor of Computer Science, GPA: 3.79 / 4.0 *Sep 2023 - Jun 2027 (Expected)*
- Majoring Computer Science in BINUS @Bandung fifth Semester, Software Engineering specialization in BINUS @Kemanggisan.

Relevant Coursework: Object Oriented Program, Software Engineering, Code Reengineering, Framework Layer Architecture, Pattern Software Design, Data Structures & Algorithms, Scientific Computing, Artificial Intelligence
Member: HIMTI BINUS, UREEKA

TECHNICAL SKILLS

Programming Langauges: Python, Java, C, C#, JavaScript, TypeScript, Dart, SQL
Frameworks & Tools: React, TailwindCSS, Next.Js, Flutter, Postman, NumPy, Pandas, Tensorflow/Keras, CrewAI, Matplotlib, LangChain, Flask, Streamlit, MySQL, Microsoft Azure, Tableau, SAP Analytics Cloud, ASP.NET, Google Collab, GitHub, Figma, Jira, Notion

EXPERIENCES

The 10th International Conference on Computer Science and Computational Intelligence 2025 (ICCSCI) **Online**
Researcher | Data Acquisition, Data Preprocessing, Python, Numpy, Matplotlib, Pandas, Tensorflow *Feb 2025 – Aug 2025*
- **Spearheaded research** on B-cell Acute Lymphoblastic Leukemia (B-ALL) detection through image classification, comparing CNN, YOLOv11, and Vision Transformers.
- **Managed the end-to-end research pipeline**, from data acquisition and preprocessing to designing a standardized CNN architecture and conducting rigorous performance evaluations using 8+ distinct metrics.
- Authored a research paper on the findings, which was successfully **presented to an international academic community**, contributing new insights to the field of medical image classification.

BINUS UNIVERSITY **Onsite**
3x Teaching Assistant | Trial Class teaching *Nov 2024 – Jan 2025*
- **Mentored 145+ high school students** in algorithmic logic, problem-solving principles, and software development fundamentals using Blockly and MIT App Inventor, fostering early interest in technology.
- Assisted lecturers in delivering introductory lessons on programming, providing guidance and simplifying complex concepts for beginners.

Universitas Brawijaya Hology 2.0 Hackathon 2025 **Online**
Web Development | React, TailwindCSS, TypeScript *Aug 2025 – Sep 2025*
- **Led the front-end development** for "BukaPajak," a web3 platform designed to enhance transparency in public tax management by building a responsive and interactive UI with React, TypeScript, and TailwindCSS.
- Implemented data visualization features for the tax allocation transparency dashboard and integrated the front-end with backend smart contracts to ensure real-time and publicly verifiable transaction logging.

2nd Winner- Universitas Syiah Kuala INFEST Hackathon 2025 **Online**
Software Development | Typescript, React, Javascript, TailwindCSS, HTML *Oct 2025 – Present*
- **Architected the system workflow** for "Teman Usaha," an AI-powered Investment-as-a-Service platform connecting investors with Micro, Small & Medium Enterprises (MSMEs) in remote Indonesian regions.
- Coorperating the conceptual **AI Processing Pipeline**, incorporating a Fraud Detection Engine (Isolation Forest), a Clustering Engine (K-Means/DBSCAN) for MSME segmentation, and a Credit Scoring Engine (XGBoost) to assess investment viability.
- Contributed to ideation, system workflow, and data research, defining the core value proposition and technical requirements to ensure a secure, transparent, and scalable investment ecosystem.
- 22 hours of non-stop prototyping at IndigoSpace, Banda Aceh to compete in the final stage of the competition.

PROJECTS

BukaPajak | Javascript, React, Next.Js, TailwindCSS, GitHub, HTML *Aug 2025 – Sep 2025*
- **Engineered a responsive and interactive front-end using** React, TypeScript, and TailwindCSS for a Web3 platform designed to enhance transparency in public tax management.
- Developed key data visualization features for the tax allocation dashboard and integrated the user interface with webhooks, backend REST APIs and smart contracts to ensure real-time, verifiable transaction logging.

SocMedVA | Flutter, Dart, Python, Google AI Studio, Vosk, Pyttsx3 *May 2025 - Aug 2021*

- **Spearheaded the development** of an AI-integrated mobile app that provides elderly users with real-time, voice-activated guidance for navigating social media via an intuitive screen overlay.
- **Architected and implemented the end-to-end AI pipeline**, integrating Vosk for speech-to-text, a prompt-tuned Gemini model for instruction generation, and pyttsx3 for text-to-speech output.
- Acted as **Scrum Master**, guiding a team of five through the scrum (agile methods), from initial configuration and sprint planning to final application delivery. Scrum documentation can be accessed [here.](#)

Chattipus Bottotipus | Python, Streamlit, LangChain, OpenRouter   *Aug 2025 - Sep 2025*
- **Engineered a highly customizable AI chatbot** featuring adjustable LLM parameters, automated conversation summarization, multi-model support, and custom prompt engineering (project instructions) implementation through the OpenRouter API.
- Independently researched and integrated LLM parameter tuning (temperature, top-p, top-k) to provide users with fine-grained control over response generation for various use cases.

Tunaskarsa | Flutter, Dart   *Sep 2024 - Jan 2025*
- **Developed a mobile application** to help parents manage children's screen time through a gamified system that locks the device and requires educational quizzes to be completed to earn more usage time.
- Engineered the core screen-time management logic, including the countdown timer, user notification system, and an override algorithm that automatically brings the app to the forefront when time expires.

LogTech | MySQL   *Oct 2024 - Jan 2025*
- **Architected a complete relational database schema** for a simulated logistics company in order to modeling its transition to a digital-first operational concept.
- **Led the data normalization process** from Unnormalized Form (UNF) through Third Normal Form (3NF), analyzing functional dependencies and resolving data anomalies to ensure database integrity.

ORGANIZATION & LEADERSHIP EXPERIENCE

Himpunan Mahasiswa Teknik Informatika (HIMTI)   **Jakarta**
Responsi Activist | Academic Writer & Material Documentation   *Mar 2025 – Jan 2025 (Expected)*
- Served as an activist in the Responsi Division of HIMTI BINUS, responsible for creating accessible study summaries for All Region - BINUS students (Batch B27 & B28), including midterm and final exam materials. Collaborated with the team to ensure effective communication and smooth execution of learning support activities.

Himpunan Mahasiswa Teknik Informatika (HIMTI)   **Jakarta**
Technical Lead of PBP & PBP Bootcamp 2025   *Sep 2025*
- Served as Technical Lead of PBP Bootcamp, a 3-week online program designed to prepare Computer Science freshmen by covering the full scope of first-semester courses. Responsible for managing the learning flow, ensuring smooth technical execution, and coordinating participant data to deliver an effective learning experience

UREEKA   **Online**
Web Development Member | Javascript, React, Next.Js, TailwindCSS, GitHub, HTML   *Mar 2025 – Jan 2025 (Expected)*
- **Competed in 3+ intensive hackathons**, mastered **front-end technologies** including React, Next.js, and TailwindCSS to build responsive and dynamic user interfaces from ideation to deployment.
- Collaborated in teams to solve complex real-world problems, adhering to software engineering best practices and industry standards.

CERTIFICATIONS

NVIDIA Certified: Fundamentals of Deep Learning
- Developed a foundational understanding of deep learning, including constructing Convolutional Neural Networks (CNNs, applying data augmentation techniques, and make prediction using Python and TensorFlow.

Microsoft Certified: Azure AI Fundamentals ElevAIte
- Acquired knowledge of core Machine Learning concepts, AI ethics, and the fundamentals of implementing AI solutions on the Microsoft Azure platform.

Pesta Data Nasional (PeDas) Data Visualization Workshop 2023 Sponsored by Tableau
- Learn about solving data visualization problems from various data types and condition, transforming complex findings into clear and persuasive visual narratives, also applied statistical analysis and visualized the results using Tableu.

ASEAN Data Science Explorers – Enablement Session Programme
- Gained hands-on experience with SAP Analytics Cloud by analyzing sample data, performing data categorization, and creating various visualizations to derive insights.