Personal Statement and Research Proposal

Introduction

I am eager to pursue advanced studies in Informatics at Universitas Amikom Yogyakarta, with a dedicated focus on developing data-driven and intelligent systems that address real-world challenges. Having completed my Bachelor's degree in Computer Science with a final GPA of 3.62, I have cultivated a solid academic foundation alongside extensive hands-on experience in advanced informatics techniques. My aspiration is to harness the transformative potential of informatics to improve decision-making, optimize systems, and contribute meaningfully to Universitas Amikom's esteemed research community.

Motivation and Relevance of Informatics

The field of informatics plays a pivotal role in transforming how data is used to solve complex societal, organizational, and technological problems. From decision support systems and information retrieval to intelligent automation and user-centered design, informatics offers versatile applications that span across domains. I am particularly motivated by the opportunity to design intelligent systems that integrate data analytics, human-computer interaction, and ethical computing. This interdisciplinary convergence is at the core of my research ambitions. Studying at Universitas Amikom, an institution renowned for its research excellence and commitment to innovation, will provide the ideal environment to pursue these endeavors.

Why Indonesia and Universitas Amikom Yogyakarta

My undergraduate studies in Indonesia not only provided me with a robust academic foundation but also instilled in me a deep appreciation for the nation's rich cultural heritage and its progressive approach to technology. Immersed in an environment where academic rigor and innovation converge, I experienced firsthand Indonesia's commitment to digital transformation and interdisciplinary research. This formative experience has profoundly shaped my academic aspirations and solidified my desire to continue my scholarly journey on Indonesian soil. Universitas Amikom Yogyakarta epitomizes the academic excellence and forward-thinking research environment that I seek. Renowned for its state-of-the-art research facilities and its emphasis on integrating advanced technology with real-world applications, Universitas Amikom offers an ideal setting for pursuing cutting-edge studies in Informatics. My specific interest in leveraging informatics to address complex challenges such as optimizing information systems, designing ethical computing solutions, and enhancing digital platforms finds a natural ally in Universitas Amikom's dynamic and collaborative research culture.
It is my firm belief that by deepening my expertise in Informatics within the stimulating academic milieu of Universitas Amikom, I will be well-equipped to develop transformative solutions that not only serve local communities but also resonate on a global scale.

Academic Background and Research Interests

I earned my Bachelor of Computer Science with a final GPA of 3.62, which attests to my dedication and proficiency in rigorous academic environments. My coursework in advanced mathematics, algorithms, data structures, Natural Language Processing, and Big Data has provided me with the analytical skills necessary for research in intelligent systems and data science. This strong academic grounding has fueled my interest in exploring how informatics can be applied to domains such as social analytics, intelligent platforms, and digital transformation.

Research Projects and Practical Applications

My academic journey has been marked by several projects that underscore my commitment to advanced informatics techniques:

- **Aspect-Based Sentiment Analysis**: I developed a model using BERT-base architecture to analyze Arabic social media reviews, achieving a sentiment classification accuracy of 95%. This project honed my ability to manage complex data challenges and deepened my understanding of transformer-based models a skill set that I plan to translate into broader informatics applications, such as user feedback evaluation and public opinion mining.
- **Independent AI Projects**: I have actively engaged in self-directed projects focusing on object detection, regression analysis, transfer learning, image classification, and data augmentation. These initiatives have broadened my technical repertoire and demonstrated the versatile potential of informatics, particularly in areas such as intelligent data systems and adaptive platforms.
- **Practical Application Development**: I created DearDay, a mental health platform that integrates AI-driven mood tracking, journaling, and sentiment analysis to provide personalized insights, and developed a real-time Password Strength Checker. These projects illustrate my ability to design and implement user-centric applications that address real-world challenges a skill that I am keen to further develop in the context of information systems and intelligent application design.

Internship and Lab Assistance Experience

My practical experience spans several roles that have significantly enhanced my technical and pedagogical skills:

- **Lab Assistant – Deep Learning Fundamentals**: In this role, I mentored students in deep learning, offering hands-on guidance with TensorFlow and Keras. I explained complex concepts related to neural network architectures, model training, and performance evaluation, thereby refining my ability to communicate sophisticated technical ideas effectively.
- **Lab Assistant (Sep 2023 – Jan 2023)**: I assisted students with data cleaning, statistical analysis, and visualization using Python and SQL. This position involved troubleshooting

technical issues and managing datasets experiences that have equipped me with robust problem-solving skills applicable to a wide range of informatics tasks.

- **Lab Assistant for English for Information Technology and Professional Ethics**: Under the mentorship of Dr. Ahmad Luthfi at Universitas Islam Indonesia, I supported instructional activities and provided technical guidance in courses that bridged technological proficiency with ethical considerations. This role underscored the importance of ethical frameworks in deploying informatics solutions, especially in sensitive or high-impact domains.
- **Remote Internship at GAO Tek Inc., New York, USA (Ongoing)**: Currently, I am engaged in a remote internship that focuses on full-stack web development and data analysis. This project-based experience allows me to apply theoretical knowledge to real-world challenges, further honing my technical expertise and reinforcing my commitment to innovative, solution-oriented research.

Technical Proficiency and Multidisciplinary Approach

I am proficient in Python, SQL, HTML, CSS, and JavaScript, and have extensive experience with AI frameworks such as TensorFlow, Keras, and Hugging Face. My capabilities in data visualization and statistical analysis I am proficient in Python, SQL, HTML, CSS, and JavaScript, and have extensive experience with AI frameworks such as TensorFlow, Keras, and Hugging Face. My capabilities in data visualization and statistical analysis using Power BI and Jupyter Notebook empower me to analyze complex datasets an essential skill in informatics-driven projects. Additionally, my fluency in Arabic and English, along with intermediate proficiency in Indonesian, equips me to collaborate effectively in diverse, multidisciplinary teams, fostering an inclusive approach to research and innovation.using Power BI and Jupyter Notebook empower me to analyze complex datasets an essential skill in informatics-driven projects. Additionally, my fluency in Arabic and English, along with intermediate proficiency in Indonesian, equips me to collaborate effectively in diverse, multidisciplinary teams, fostering an inclusive approach to research and innovation.

Long-Term Vision

My long-term vision is to specialize in informatics research with a focus on intelligent systems and data-driven innovation. I aim to develop digital solutions that optimize information flow, support data-based decision-making, and enhance human-computer interaction. By integrating advanced computational methodologies with interdisciplinary knowledge, I aspire to contribute to the transformation of digital ecosystems and information services. Ultimately, I am committed to leveraging my expertise to drive sustainable innovation in informatics, benefiting communities both locally and globally.