



# ESA MAIDATUSOHIRA

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I am a 6th-semester student in Informatics Engineering at Universitas Negeri Surabaya, with over 25 international certifications. My experience spans projects in AI-based applications, web design, data analysis, and machine learning, a skill that is highly valuable for business analysts and business intelligence to drive data-driven insights.

## Work Experiences

**Kementerian Komunikasi dan Informatika Kabupaten Pasuruan - Pasuruan**

Jul 2024 - Oct 2024

### Application Web

- Designed and implemented a web application to monitor and manage meeting room reservations for the district office.
- Created and optimized a database to store reservation and meeting schedule data, ensuring fast and reliable access.
- Conducted thorough testing to ensure functionality and security, while also providing updates and enhancements based on user feedback.

## Education Level

**Universitas Negeri Surabaya  - Surabaya**

Jul 2022 -

Bachelor, 3.76/4.00

- Accepted into the Bangkit Academy Batch 2 program under the MSIB initiative by Kemendikbud, focusing on Machine Learning.
- Earned over 20 certifications in Machine Learning, Data Analysis, and Web Development from prestigious institutions such as Stanford University, Coursera, Dicoding, and AWS.
- Interned at KOMINFO Pasuruan as an Application Programmer and developed a room booking web application using Laravel.
- Completed more than 20 projects in Machine Learning, Data Analysis, and Web Development.
- Published a research paper in the IEEE journal about redesigning an e-commerce website.
- Participated actively in student scientific activities through the campus research unit.
- Joined external organizations and volunteered in various initiatives to contribute to the community.

## Project

### Machine Learning Engineer

- Customer Segmentation : Performed customer segmentation using K-Means clustering on demographic data like age, income, and spending behavior, with results visualized in 2D and 3D plots.
- Image Classification (Cats vs. Dogs) : Developed a CNN using TensorFlow and Keras to classify cat and dog images, achieving high accuracy through preprocessing, image rescaling, and early stopping.
- Horse-or-Human Image Classification : Built a CNN to classify horse and human images, optimizing training by reducing image sizes and using TensorFlow for preprocessing and data augmentation.
- Cat vs Non-Cat Image Classification : Designed a deep neural network to classify cats vs. non-cats, leveraging gradient descent and a two-layer architecture for improved accuracy.
- Time Series Forecasting : Created a CNN model for time series forecasting with TensorFlow, using feature engineering and augmented datasets to predict trends accurately.
- Time Series Forecasting with RNN and LSTM Models : Built a forecasting model with RNN and Bidirectional LSTM layers in TensorFlow, optimizing performance with dynamic learning rates and metrics like MSE and MAE.
- Emoji Emotion Classifier : Developed a CNN to classify happy and sad faces, achieving 99.9% accuracy using TensorFlow and early stopping techniques.
- Handwritten Digit Classification : Created a TensorFlow model to classify handwritten digits from the MNIST dataset with 98% accuracy, leveraging custom early stopping.
- NV-Bite: Sustainable Food Scanner : Developed an image classification system for the NV-Bite app using CNNs to analyze food images. The model is trained to classify food items, estimate their carbon emissions based on image features, and generate detailed sustainability reports using generative AI for providing actionable environmental insights.

### Data Analyst

- Analyzed differences in meal allowances based on employee job levels using box plots and significance testing ( $P < 0.05$ ).
- Examined the correlation between family support and death anxiety using the Spearman correlation test.
- Conducted path analysis on student data to identify direct and indirect relationships between variables (stress, social environment, self-control, and compliance).
- Developed multiple data visualization dashboards to effectively present analytical insights.

### Web Developement

- E-Commerce Cake Shop Website : The e-commerce website for a cake shop features an interactive sidebar displaying best-selling cakes at the top of the page, an email ordering system enabling direct orders via SMTP, and a responsive design built with HTML, CSS, JavaScript, and Tailwind CSS to ensure accessibility and elegance across all devices.
- Bromo travel website : helps tourists explore Mount Bromo with dynamic tour package options (Main, Sunset, and Night) implemented using JavaScript, price and destination information stored in MongoDB, Jeep rental details managed via Node.js and Express.js, and a user-friendly interface designed with Figma and Tailwind CSS for seamless navigation and visual appeal.
- School profile website : Features a section for displaying the school's name and history, developed using HTML, CSS, and JavaScript, as well as a news update section for the latest announcements, managed with MySQL for efficient storage and retrieval.

## Skills, Achievements

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- **Hard Skills:** Tableau, Power BI, Google Data Studio, Excel (PivotTable, Charting), Python, Rstudio, SQL, HTML,CSS, JavaScript, Computer Vision, Machine Learning, Deep Learning
- **Soft Skills:** Communication skills, Critical thinking ,Creativity ,Collaboration ,Decision Making
- **Modules Taken** 🎓: Dicoding Academy, Coursera, DQ-Lab Academy, AWS Skill Builder