Eirene Michella Tjhan

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EDUCATION

BINUS University, GPA: 3.80 / 4.00 *2023 - 2027*
Data Science
Relevant Coursework: Machine Learning, Deep Learning, Model Deployment, Data Mining & Visualization, Big Data, etc.
Member: Data Science Club, Data Seeker (Data Science Competition Team)

TECHNICAL SKILLS

Programming Languages: Python, R, SQL
Frameworks & Tools: TensorFlow, Keras, Scikit-learn, Matplotlib, Seaborn, Plotly, Tableau, PowerBI, PySpark, Hadoop, Streamlit, Docker, Jupyter Notebook, VS Code

PROFESSIONAL EXPERIENCES

PT. Pandansari Prima Anugrah **Tangerang**
Finance & Administrative Part-Time *April 2023 - August 2025*
- Processed daily cash and check (giro) transactions, ensuring accurate financial documentation and timely bank deposits.
- Coordinated with banking representatives to complete payment transfers and clearance procedures.
- Assisted with financial record management and maintained organized transaction logs to support internal reporting.

ORGANIZATION EXPERIENCES

Karsa4youth **Tangerang**
Head of Secretariat | Head of Public Relations | Head of Education *July 2021 - Present*
- Managed organizational administration, including documenting weekly meetings, maintaining reports, and coordinating internal communication among divisions.
- Led the Public Relations division by overseeing volunteer recruitment, conducting interviews, and providing direction to the design and outreach teams.
- Developed and implemented educational initiatives alongside medical programs, such as creating workshops and booklets to promote health education in underprivileged communities.
- Contributed to project planning and idea development to expand the organization's social and medical impact.

Data Science Club **Jakarta**
Team Leader at Survey Corps Division | Human Resource Development *February 2024 – Present*
- Led the Survey Corps division under the Human Capital program, responsible for designing and managing internal organizational surveys using Google Forms.
- Supported HRD initiatives by assisting in member recruitment and conducting interviews for new applicants.
- Volunteered as a committee member in several Data Science Club projects, contributing to registration management and public relations coordination.

Data Seekers **Jakarta**
Member *September 2025 – Present*
- Selected as a member of Data Seekers, the official competition team of the Data Science Club, trained and funded by the university to represent the institution in data science competitions.
- Participate in various data analytics and machine learning competitions, applying technical and problem-solving skills to real-world datasets.
- Collaborate with team members to develop data-driven solutions and enhance university representation in national-level events.

Tumpu.id **Tangerang**
Co-Founder | Head of Secretariat *November 2021 - August 2023*
- Served as the key coordinator and trusted advisor to the leadership team, ensuring smooth communication and task execution across all divisions.
- Recorded and organized meeting notes, managed schedules, and sent regular deadline reminders to maintain team accountability and productivity.
- Prepared official organizational reports and handled external collaborations with schools, local communities (RT/RW), and partner institutions.
- Actively contributed to Tumpu's educational mission by speaking at seminars and leading community outreach programs for underprivileged groups.

CERTIFICATIONS

Google Advanced Data Analytics — **Tangerang**
Google | Professional Certificate — *August 2025 - November 2025*

Meta Data Analyst — **Tangerang**
Meta | Professional Certificate — *August 2025 - October 2025*

IBM Data Science — **Tangerang**
IBM | Professional Certificate — *April 2024 - October 2025*

Fundamental of Machine Learning — **Tangerang**
Digital Talent Scholarship | Bootcamp — *July 2025 - August 2025*

Data Classification and Summarization using IBM Granite — **Jakarta**
IBM SkillBuilds x Hacktiv8 | Seminar — *August 2025*

ASEAN Data Science Explorers 2025 Enablement Session – SAP Analytics Cloud — **Jakarta**
ASEAN Foundation | Seminar — *March 2025*

Fundamental of Deep Learning — **Jakarta**
NVIDIA | Professional Certificate — *January 2025*

Data Science Short Course: Professor Widom's Instructional Odyssey (Stanford Lecturer) — **Jakarta**
Bina Nusantara University | Bootcamp — *September 2024*

PROJECTS

Complete Portfolio: GitHub Repository | A collection of data science and deep learning projects demonstrating skills in analysis, modeling, and visualization.

Pistachio Image Generation using GANs | Link
This project explored generative modeling using pistachio images to synthesize realistic samples through adversarial learning. The goal was to train models capable of producing high-quality pistachio images that closely resemble real ones, evaluated using quantitative and perceptual metrics.

- **Tools**: Python, TensorFlow, Keras, Matplotlib, NumPy
- **Approach**: Compared three models: a simple GAN (baseline), a DCGAN with convolutional layers, and a fine-tuned DCGAN with adjusted filters, dropout, and learning rates for better balance between generator and discriminator.
- **Results**: The Fine-Tuned DCGAN achieved the lowest FID score (181.93) on the full dataset, indicating the highest realism. It produced smoother and more visually coherent images compared to the Baseline and DCGAN models.
- **Key Insight**: Fine-tuning hyperparameters such as filter size and learning rate significantly improved visual realism, even when training stability appeared lower.

Brain Tumor Image Segmentation using U-Net Architecture | Link
This project focused on segmenting brain tumors from MRI scans of patients with Lower-Grade Glioma (LGG) using a U-Net deep learning architecture. The dataset contained MRI images paired with expert-labeled tumor masks outlining tumor regions. The goal was to automatically identify and localize tumors to assist in diagnosis and treatment planning.

- **Tools**: Python, TensorFlow, Keras, NumPy, OpenCV, Matplotlib
- **Approach**: Implemented a U-Net model for pixel-wise tumor segmentation. The model was trained on paired MRI images and masks, with evaluation based on accuracy, Intersection over Union (IoU), and Dice coefficient.
- **Results**: Achieved test Accuracy = 99.70%, Dice = 0.739, and IoU = 0.849, showing strong overall performance. However, because most pixels in MRI scans represent background, high accuracy can be misleading; the model may classify healthy regions perfectly but still miss small tumor areas. Visual inspection confirmed that while the model captured tumor regions well, minor outline mismatches and missed details occurred on complex shapes.
- **Key Insight**: U-Net performs effectively for medical image segmentation but should be evaluated beyond accuracy. Metrics like Dice and IoU, alongside visual inspection, provide a more realistic view of model performance, especially for critical tumor boundary detection.