

# Darnell Ignasius

ignasiusdarnell@gmail.com | +6285156190936 | Purworejo, Indonesia  
linkedin.com/in/darnell-ignasius | portofolio.darnell.my.id



Data Analyst and AI Engineer with a strong background in Information Systems and expertise in machine learning, computational modeling, and data-driven problem solving. Experienced in transforming raw data into actionable insights, analyzing complex datasets, creating meaningful visualizations, and building highly accurate predictive models (up to 97.56% performance). Proven leadership and communication skills demonstrated through roles as a Data Analytics Lead and Python Programming Trainer, along with contributions to AI-related publications. Adept at designing data pipelines and bridging technology with business needs to deliver impactful solutions.

## Education

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### Universitas Dian Nuswantoro

Sep 2022 – Feb 2026

Bachelor of Information Systems

- GPA: 3.90/4.00
- Award: Merit Scholarship Recipient

### Universitas Gadjah Mada

Feb 2024 - Jul 2024

Student Exchange Program

- GPA: 3.73/4.00
- Concentration: Software Engineering & Data Science

## Work Experience

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### LPK Wahana

Jul 2025 - Present

Python Programming Trainer

- Delivered Python, data analysis, and introductory data analytics training to 20+ participants using Python and Scikit-learn, significantly enhancing their analytical thinking and problem-solving capabilities
- Designed hands-on exercises in data processing, visualization, and machine learning using Pandas, Matplotlib, Tableau, and Jupyter Notebook, enabling the practical application of core analytics concepts
- Built an end-to-end machine learning pipeline using Python, Pandas, and Scikit-learn, covering data preprocessing, model training, evaluation, and inference
- Evaluated participant performance using structured assessment metrics in Google Sheets, optimizing training feedback and learning outcome tracking

### Badan Pusat Statistik (BPS)

Jul 2025 - Aug 2025

Public Relations Intern

- Developed a web-based task management system using Laravel and MySQL, streamlining internal workflow and boosting operational efficiency by 25%
- Supported structured data handling and information flow using Microsoft Excel and Google Workspace, ensuring 100% data organization accuracy and reporting consistency
- Ensured smooth execution of institutional events by resolving technical issues in real-time, reducing operational disruptions

### Goshi

Mar 2021 - Sep 2021

Intern - Digital Marketing

- Increased campaign engagement by analyzing performance data and optimizing content strategies across digital platforms
- Improved website SEO performance and organic traffic by 22% by managing and optimizing content using WordPress and SEO tools, enhancing overall user experience
- Supported data-driven decision-making by analyzing website analytics and reporting insights for content planning

## Organizational Experience

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### IDSS Udinus

Sep 2025 – Dec 2025

Member

- Contributed to AI-driven healthcare research initiatives involving medical data processing and experimental evaluation.
- Collaborated in academic-industry research projects with OncoDoc AI, supporting system development and analytical experimentation.
- Assisted in structured data preparation, model validation, and research documentation for publication-level outputs.

### Matics Udinus

Feb 2023 - Nov 2025

Member

- Participated in computational material research utilizing quantum simulation methodologies.
- Supported experimental workflows and data analysis for simulation-based material modeling.
- Contributed to technology outreach initiatives introducing emerging computational approaches.

### DNCC

Head of Data Analytics Division

Jul 2024 - Aug 2025

Data Analyst Member

Jan 2023 - Jul 2024

- Led data analytics initiatives and conducted Python workshops for 50+ participants focused on applied data visualization and analytical modeling.
- Coordinated cross-functional technical teams across three major technology events.
- Directed stakeholder communication and operational alignment as Chief Liaison Officer, ensuring execution efficiency and structured collaboration.

### OSIS SMK Telekomunikasi Tunas Harapan

Mar 2021 - Jan 2022

Head of IT Division

- Developed and maintained the organization's official website, improving digital information accessibility.
- Designed and implemented event registration and online voting systems to streamline organizational workflows.
- Managed digital communication strategy and content operations to increase student engagement.

## Project

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### Highlighted Projects

Customer Churn Prediction API (FastAPI + Docker)

- Built a machine learning model achieving ~90% accuracy for churn prediction using Scikit-learn
- Deployed the model as a REST API with <200ms latency for real-time inference
- Containerized using Docker to ensure scalable and consistent deployment

Sales Performance Dashboard (SQL + Tableau / Power BI)

- Analyzed 10k+ sales records using SQL and EDA to identify key revenue drivers
- Built interactive dashboards to track KPIs (revenue, growth, customer segmentation)
- Automated reporting workflows, reducing manual analysis effort

### Data Science Projects

- **Corrosion Inhibition Prediction** - Develop and train machine learning models to predict corrosion rates based on chemical descriptors, improving prediction accuracy against experimental data.
- **Corrosion Inhibition Prediction with Data Augmentation** - Expanding the dataset using Gaussian Mixture Model (GMM) and training eight ML algorithms, resulting in improved model performance with Gaussian Process R2 improving from -1.54 to 0.54.
- **Thyroid Disease Classification** - Performed data balancing using SMOTE, trained a classification model, and optimized hyperparameters with GridSearch, achieving 95% accuracy
- **HCC Disease Classification** - Optimized TabNet hyperparameters for HCC disease classification, improving model performance to 97.56% compared to the conventional baseline
- **Poverty Clustering in Indonesia** - Clustering based on socioeconomic indicators using K-Means and GMM to identify poverty patterns across regions

- **Kidney Disease Detection** - Developed a YOLOv8 model with domain adaptation for kidney disease detection and implemented the Segment Anything Model (SAM) to perform high-precision automatic segmentation.
- **Car and License Plate Number Detection** - Built a Yolov11-based vehicle and license plate number detection system using real data to support traffic monitoring applications.

### Additional Projects

- **Big Data Architecture for Healthcare Data** - Designing real-time data pipelines for healthcare data (Yogyakarta) using Apache Kafka, Airflow, PostgreSQL, and Tableau, accelerating data processing and reporting.

### Research Publications

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- Medical Named Entity Recognition from Indonesian Health-News using BiLSTM-CRF with Static and Contextual Embeddings - *JAIC*, 2025. <https://doi.org/10.30871/jaic.v9i6.11574>
- Comparative Evaluation of Machine Learning Algorithms with Data Balancing Approach and Hyperparameter Tuning in Predicting Thyroid Disorder Recurrence - *JMASIF*, 2025. <https://doi.org/10.14710/jmasif.16.2.75073>
- Gaussian Mixture-Based Data Augmentation Improves QSAR Prediction of Corrosion Inhibition Efficiency - *JAIC*, 2025. <https://doi.org/10.30871/jaic.v9i5.10895>
- Comparative Analysis of Linear Regression, Decision Tree, and Gradient Boosting Models for Predicting Drug Corrosion Inhibition Efficiency Using QSAR Descriptors - *Faktor Exacta*, 2024. <http://dx.doi.org/10.30998/faktorexacta.v17i3.24679>

### Certifications

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- BNSP (2026) – Associate Data Scientist
- IBM (2025) - Use Generative AI for Software Development
- PACMAN (2024) - Data Preprocessing, Visualization, and ML with Python (Pandas, Scikit-learn)
- DQLab (2024) - Data Visualization with Matplotlib, Seaborn, Tableau
- IBM (2024) - Introduction to Quantum Computing for Data Science
- SAP ASEAN Data Science Explorers (2024) - SAP Build Apps & SAP Analytics Cloud

### Achievement

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**Finalist - GEMASTIK XVIII , Scientific Paper Category**

2025

### Skills & Languages

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**Programming** : Python, SQL, GO, PHP

**Data Visualization**: Excel, Tableau, Power BI, Matplotlib, Seaborn, Dashboard Development, KPI Analysis, Data Storytelling

**AI**: Pandas, NumPy, Data Cleaning, Machine Learning (Scikit-learn), Deep Learning (TensorFlow, Keras), Data Visualization (Matplotlib, Seaborn), Git

**Soft Skills** : Analytical Reasoning, Structured Problem Solving, Cross-Team Collaboration

**Languages** : Indonesian (Native) , English (Professional Working Proficiency)