

Trikarsa Tirtadwipa Manunggal

Software Engineer

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I am a curious and determined individual with a strong appetite for knowledge and a willingness to take on challenges. My passion lies in the fields of software engineering and machine learning, with a focus on using these technologies to improve the lives of people in various domains.

Work Experience

September 2024 - June 2025 **Lead Software Engineer**
Zora Health Pte Ltd - Singapore

- **Technology stack:** Golang, NextJS, Typescript, Postgresql, Google Cloud Platform
- Setting up system and microservices infrastructure
- Develop backend and frontend features
- Work on application search engine optimization

January 2023 - August 2024 **Technical Product Manager**
Dcentric Health Ltd - Limassol, Cyprus

- **Technology stack:** Multichain, Substrate, Polkadot, Typescript, Rust, MongoDB, AWS, FastAPI, React, React Native, Kafka, Flutter
- Collaborate with stakeholders to gather product requirements and translate it into technical specifications
- Work closely with engineering teams to drive product development
- Involved in features implementations

November 2021 - January 2023 **Backend Engineer (part-time)**
Dcentric Health Ltd - Limassol, Cyprus

- **Technology stack:** Multichain, Substrate, Polkadot, Typescript, Rust, MongoDB, AWS, FastAPI, React, React Native
- Implement features and fix bugs
- Manage releases and deployments

March 2022 - January 2023 **Senior Fullstack Engineer**
mClinica Pte. Ltd. (PT. mClinica Health Solutions) - Jakarta, Indonesia

- **Technology stack:** Typescript, NestJS, MySQL, MongoDB, Redis, ReactJS, Azure DevOps Services, Kubernetes, Google Cloud Platform
- Deliver feature requirements either for frontend and backend side
- Write documentation upon the project implementation
- Manage feature release tasks and completeness

September 2021 - May 2022 **Software Engineer (part-time)**
spika.it - Caserta, Italy

- **Technology stack:** PHP, MySQL, CodeIgniter, AWS
- Develop and release new general features
- Develop promotion feature for new users
- Maintaining the system and fixing bugs

July 2020 -
March 2022

Fullstack Engineer

mClinica Pte. Ltd. (PT. mClinica Health Solutions) - Jakarta, Indonesia

- **Technology stack:** Typescript, NestJS, MySQL, MongoDB, Redis, ReactJS, Azure DevOps Services, Kubernetes, Google Cloud Platform
- Deliver feature requirements either for frontend and backend side
- Write documentation upon the project implementation
- Manage feature release tasks and completeness

October 2019 -
July 2020

Senior Fullstack Engineer

Medigo Indonesia (PT. Medigo Teknologi Kesehatan) - Jakarta, Indonesia

- **Technology stack:** Javascript, MongoDB, Express, Redis, VueJS, PostgreSQL, ReactJS.
- Continuously measure and improve backend and frontend development speed up to deployment.
- Provide the right and fast response in accordance with the priority of work
- Deliver the improvements via an internal library, tools, and practises, and align it with all backend and frontend engineers.
- Manage library lifecycles and documentation of best practices.
- Help grow junior engineers by providing mentorship.
- Create and develop websites and APIs using any technology that is relevant to the needs.
- Conduct research and analysis of new technologies that will support workflows in accordance with the orientation determined by the company.
- Collaborate and communicate actively with another team to ensure that deliverables can be completed on time and in line with the technical specification
- Discuss all aspects of the technical and creative side of a module to ensure that output is aligned with deliverables.

July 2019 -
October 2019

Senior Backend Engineer

Medigo Indonesia (PT. Medigo Teknologi Kesehatan) - Jakarta, Indonesia

- **Technology stack:** Javascript, MongoDB, Express, Redis, RabbitMQ
- Continuously measure and improve backend development speed up to deployment.
- Provide the right and fast response in accordance with the priority of work
- Deliver the improvements via the internal library, tools, and practises, and align it with all backend engineers.

January 2019 -
July 2019

Head of Speech Technology Division

Bahasa Kita (PT. Bahasa Kinerja Utama) - Bekasi, Indonesia

- **Technology stack :** Pytorch, ExpressJS, Flask, MongoDB, DynamoDB, RabbitMQ, ZeroMQ, AWS
- Leading development of speech and NLP related technology
- Making work plan, timeline, and architecture for the software development

November 2016 -
January 2019

Software Engineer (Machine Learning Engineer)

Bahasa Kita (PT. Bahasa Kinerja Utama) - Bekasi, Indonesia

- **Technology stack :** C, C++, Python, Javascript, Octave
- Responsible for researching about Digital Signal Processing, Numerical Method, and Machine
- Learning problem in speech and Natural Language Processing
- Mentoring intern students on Machine Learning topics

2014-2016 Bachelor of Engineering Physics (S1)
Sepuluh Nopember Institute of Technology - Surabaya, Indonesia
<http://its.ac.id>

GPA 3.72 out of 4.00

This degree covers a broad subject on physics and its application in industry ranging from instrumentation, optics, vibration, acoustics, materials, numeric methods, computation, predictive maintenance, optimization, and so forth.

2011 - 2014 Associate Degree of Engineering Physics (D3)
Bandung Institute of Technology - Bandung, Indonesia
<https://itb.ac.id>

GPA 3.70 out of 4.00

This associate degree focused on metrology and instrumentation subjects. We are taught the physics standards, all physical units measurement systems, sensors, data acquisition, computation, and also law and legal stuff that apply.

Publications, Seminars, and Awards

2023 Workshop Speaker
Boost Python Performance with Rust
Pycon Indonesia 2023 (Python Conference) - Bandung, Indonesia

2018 Publications
Single channel speech denoising with unsupervised learning non-negative matrix factorization
INACL Jurnal Linguistik Komputasional (Computational Linguistic Journal) Vol. 1, No. 1 - Jakarta, Indonesia
DOI : 10.26418/jlk.v1i1.2

2018 Workshop Speaker
Better Science Understanding with Sympy
Pycon Indonesia 2018 (Python Conference) - Jakarta, Indonesia

2018 Workshop Speaker
Signal Processing Crash Course
Machine Learning Indonesia - Jakarta, Indonesia