

Dimas Shidqi Parikesit

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RESEARCH INTEREST

System reliability, Distributed systems, Cloud systems

EDUCATION

University of Virginia

August 2024 – Present

Ph.D, Computer Science. Advised by Prof. Chang Lou

Bandung Institute of Technology (ITB), Indonesia (itb.ac.id)

August 2020 – August 2024

B.Sc, Informatics / Computer Science

GPA **3.80 / 4.0**

PUBLICATIONS

1. Deriving Semantic Checkers from Tests to Detect Silent Failures in Production Distributed Systems
Chang Lou, **Dimas Parikesit**, ...
Operating Systems Design and Implementation (OSDI) '25

RESEARCH EXPERIENCES

University of Michigan

November 2022 – December 2023

Runtime Checkers from Tests to Detect Semantic Failures

- Evaluated the tool on 20+ cases and fixed implementation correctness issues.
- Built and evaluated Daikon Invariant Checker pipeline on four distributed systems for baseline evaluation.
- Investigated and reproduced nine distributed system bugs for evaluation.
- Collaborated with Prof. Ryan Huang and Prof. Chang Lou (University of Virginia).

University of Chicago

April 2022 – June 2022

Cache System for Deep Learning Recommendation Model (DLRM)

- Built cache key clusters to generate approximate values as L3 cache layer to reduce slow disk access.
- Collaborated with Prof. Haryadi Gunawi.

GRANTS

SOSP 2024 Student Scholarship

November 2024

- Awarded \$400 travel grant to attend the conference

TEACHING ASSISTANT

Artificial Intelligence Lab, ITB

August 2023 – December 2023

- Artificial Intelligence: Created and graded class projects

Programming Lab, ITB

- Programming Fundamentals: Created, mentored, graded class projects and labs *August 2021 – December 2021*
- Introduction to Computation: Proctored, mentored, and graded class labs *August 2022 – December 2022*

WORK EXPERIENCES

ITB Admission Exam
Load Tester

June 2023 – July 2023

- Generated 10k users load using Apache JMeter in multiple VPS to simulate Moodle traffic.

CS Faculty ITB
Sysadmin

August 2022 – Present

- Managed and monitored linux faculty servers and laboratories totaling more than 170 PCs to ensure uptime.

Capital Dynamics Sdn. Bhd.
Software Engineer Intern

June 2022 - July 2022

- Developed static company profile websites using Next JS and Directus CMS.

PROJECTS

Distributed Queue Application (github.com/dParikesit/raft-consensus)

- Built a prototype of a distributed queue system in Python with 1K LoC, enabling high availability by employing the Raft consensus protocol.

Parallel FFT (github.com/dParikesit/parallel-programming)

- Implemented parallel Fast Fourier Transform algorithm using OpenMPI, OpenMP, and CUDA with up to 72x performance increase.

ACHIEVEMENTS AND AWARDS

4th Winner of Gemastik 2022 (#1 CS Competition in Indonesia, held by Ministry of Education)

- Ranked 4th out of 192 registered teams.
- Implemented time-series forecasting techniques to detect respiratory plague based on Google search trend data.

1st Winner of Datathon AI 2021 (Part of Indonesia AI Summit 2021, held by National Research and Innovation Agency)

- Ranked 1st out of 182 registered teams.
- Created suggestions regarding Indonesia's work from home policy to minimize the impact on economy and Covid-19 cases using linear and polynomial regression.

Unggulan 2020 Full Scholarship by Indonesia Ministry of Education

SKILL

OS: Linux, Windows Subsystem for Linux

PL: Java, Python, Javascript, Golang, C, C++, Bash

System: Zookeeper, Cassandra, Ceph

Testbed: Cloudlab, Chameleon Cloud

Web: React JS, Node JS

DS and ML: Pandas, Scikit-learn, Tensorflow, RAPIDS.AI

Automation: Ansible

REFERENCES

Chang Lou
CS, University of Virginia
[cxq3bu@virginia.edu](mailto:cqx3bu@virginia.edu)

Research Collaborator