Dimas Shidqi Parikesit

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RESEARCH INTERESTS

Areas of Interests: Distributed systems, software engineering, program analysis, machine learning

EDUCATION

Institut Teknologi Bandung — July 2020 - Present

- Informatics Engineering Major
- 4th year, 7th semester
- Available from now
- Current GPA 3.76 / 4.0
- Grades
  - Introduction to Computation: A
  - Programming Fundamentals: A
  - Algorithm and Data Structures: AB
  - Computer Organization and Architecture: AB
  - Operating System: A
  - Algorithm Strategies: A
  - Database: A
  - Computer Networks: A
  - Database Management: B
  - Artificial Intelligence: AB
  - Computer Graphics: A
  - Machine Learning: AB
  - Parallel and Distributed System: A

SMA Negeri 3 Semarang — July 2017 – July 2020

EXPERIENCES

International Research Collaboration on **Detecting and Pinpointing Silent Semantic Failures**

- Undergraduate advisor: Achmad Imam Kistijantoro, S.T, M.Sc., Ph.D.
- Collaborating with Prof. Ryan Huang of University of Michigan
- Created a runtime validation system based on rules extracted from program source code

Object Storage Applications — July 2022 – August 2022

- Setup MinIO on Kubernetes using 2 drives.
- Measured and compared read and write latencies and total throughput between 2 different MinIO instances on different machines.
- Setup Ceph on Kubernetes using 2 and 3 nodes.
- Implemented and benchmarked Ceph librados and S3 interface latencies

EV-Store — April 2022 – July 2022

- Implemented machine learning techniques to generate approximate values for Facebook DLRM to reduce 95th and 99th latency by 27% and 22%.

Capital Dynamics Sdn. Bhd. — June - July 2022

Full Stack Developer Intern

- Develop company profile websites and its content management system

PROJECTS

Distributed Queue Application

- Implemented toy distributed queue system based on Raft Consensus.

Parallel FFT

- Implemented parallel Fast Fourier Transform algorithm using OpenMPI, OpenMP, and CUDA

Homelab Server

- Understanding the difference between ZFS and XFS for small network-attached-storage use case
- Setup SMB and webdav for local network file transfer
- Hosted web apps and expose it to the internet using network tunnelling.

Python Syntax Checker

- Implemented Cocke-Younger-Kasami algorithm to create python syntax checker.

File Searching Application

- Implementing BFS and DFS algorithm to find files based on file name.

ACHIEVEMENTS AND AWARDS

4th Winner of Gemastik 2022

- Implemented time-series forecasting techniques detect respiratory plague based on Google search trend data.

1st Winner of Datathon AI 2021

- Created suggestions regarding Indonesia's work from home policy to minimize the impact on economy and Covid-19 cases using linear and polynomial regression.

3rd Winner of EU Social Digithon 2021

- Created a solution to cyber bullying in Indonesia using chat app with sentiment analysis capability.

Awardee Beasiswa Unggulan 2020

- Full scholarship awardee granted by Indonesia Ministry of Education

Participant of National Science Olympiad 2019 – Physics

Gold Medal at National Science Olympiad 2016 - Science

SKILL

Programming Languages

Java, C, C++, Python, Javascript, Golang

Tools

Apache Zookeeper, Apache Cassandra, Apache HDFS, Apache HBase, Ceph, MinIO

Platforms

Cloudlab, Chameleon Cloud, Amazon Web Services