FAISHAL ZHARFAN

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RESEARCH INTERESTS

Computer Networks, Networked Systems, Systems for ML, Distributed Systems, Video Analytics, Edge Computing

EDUCATION

Bachelor of Science, Bandung Institute of Technology (ITB)   Bandung, Indonesia
#1 Science & Engineering school in Indonesia   *Jul '19 - Jul '24*
Telecommunication Engineering; Overall GPA: 3.73/4.0, Major GPA: 3.74/4.0

Erasmus+ Student Mobility Programme, University of Zagreb   Zagreb, Croatia
Faculty of Electrical Engineering and Computing, Full-ride scholarship from the EU   *Feb '22 - Jul '22*

SELECTED PUBLICATIONS

CONCIERGE: Towards Accuracy-Driven Bandwidth Allocation for Video Analytics Applications in Edge Network   2024
Yuyang Huang, Faishal Zharfan, Hendrawan Hendrawan, Haryadi S. Gunawi and Junchen Jiang
2024 IEEE International Conference on Edge Computing & Communications (EDGE '24)

Modelling of Wireless OFDM System with Deep Learning-based Modulation Detection   2022
Rahmat Mulyawan, Faishal Zharfan, Muhamad Rizki Nur Rahman, Infall Syafalni, Nana Sutisna, Trio Adiono
2022 International Symposium on Electronics and Smart Devices (ISESD '22)

Comparison of Caching Replacement Policies in Changing the Number of Interest Packets on Named Data Networks Using Mininet-NDN   2021
Faishal Zharfan, Larastya Devindira Hasnaa, Nana Rachmana Syambas, Ridha Muldina Negara
15th International Conference on Telecommunication Systems, Services, and Applications (TSSA '21)

RESEARCH EXPERIENCES

International Undergraduate Research Collaboration on Video Analytics   *Oct '22 - Jul '24*
Undergraduate Research Assistant

· Collaborated with **Prof. Junchen Jiang of the University of Chicago** and **Prof. Hendrawan of Bandung Institute of Technology**
· Implemented **Concierge**, an accuracy-sensitivity based resource allocator designed for maximizing object detection systems performance under limited resources
· Successfully **improved the average f1-score** of DDS and AWStream by **10%** as well as **optimized** DDS and AWStream **processing performance** by **50%**
· Supported by the MoECRT Garuda Open Research Program.

Undergraduate Research Collaboration on Mobile EEG   *Jul '23 - Jun'24*
Undergraduate Research Assistant

· Collaborated with **Wervyan Shalannanda of Bandung Institute of Technology**
· Designed an early seizure detection system frontend utilizing **EEG electrode cap**, **Open BCI Cyton Board**, and **Raspberry PI**
· Analyzed the **E2E data transmission delay** of the system under 3 network conditions (LAN, 2 Subnets, Cloud)

Undergraduate Research Collaboration on DL for 5G Communications   *Apr '22 - Dec '22*
Undergraduate Research Assistant

· Collaborated with **Prof. Trio Adiono** and **Rahmat Mulyawan of Bandung Institute of Technology**
· Designed a smart wireless OFDM system with deep learning-based modulation detection
· Successfully **achieved 91.375%** of accuracy through experiments by utilizing Adalm Pluto
· Supported by Riset ITB-Young Researcher Grant 2022

TEACHING

Teaching Assistant	ET4047: Artificial Inteligence & Big Data Analysis for Telecommunication
Teaching Assistant	ET2107: Programming
Lab. Assistant Coordinator	ET2214: Telecommunication Laboratory Works IIB (Computer Networks I)

INDUSTRY EXPERIENCES

Intern, ZTE Indonesia *Jul '24 - Present*
Mentor: Xu Wu

COMPUTER SCIENCE SKILLS

Programming Languages	Python, Go, C, C++, MATLAB
Operating Systems	Linux, Unix, Shellscript
Network Simulation	eNSP, Packet Tracer
Machine Learning & AI	Tensorflow, Keras, Pytorch
Cloud Computing	GCP, Chameleon Cloud, AWS, Huawei Cloud
Orchestration Systems	Docker, Kubernetes
Database	MySQL, MongoDB
Other	Latex

ACTIVITIES

Huawei Seeds for The Future 2022 Aug 2022
Indonesia Representative

· **Selected along 10 Indonesia delegations** to attend Huawei Seeds for The Future 2022
· Participated in Tech4Good competition, we propose **CanTing**, an early stunting detection system
· Explored various Huawei technologies such as **AI**, **5G**, **Cloud Computing**, etc

ACHIEVEMENTS

Third Winner - Huawei ICT Competition on Computing Track at National Level (2023)

Third Winner - Huawei ICT Competition on Network Track at Global Level (2023)

Second Winner - Huawei ICT Competition on Network Track at Regional (Asia-Pacific) Level (2023)

First Winner - Huawei ICT Competition on Network Track at National Level (2022)

Second Place - Most Outstanding Student of Telecommunication Engineering, ITB (2022)

HONORS

Ganesha Award - Ganesha Karsa, ITB (2023)

Fellowship Awardee - Summer of Reproducibility, UC Santa Cruz (2023)

Scholarship Awardee - Erasmus+ International Credit Mobility (2022)

Scholarship Awardee - Electrical Engineering Alumni Association (2022)

REFERENCES

Junchen Jiang	**Hendrawan**	**Wervyan Shalannanda**
Assistant Professor	Full Professor	Assistant Professor
University of Chicago	*Bandung Institute of Technology*	*Bandung Institute of Technology*
junchenj@uchicago.edu	hend@stei.itb.ac.id	wervyan@stei.itb.ac.id