

# FAISHAL ZHARFAN

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## RESEARCH INTERESTS

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

## EDUCATION

<b>Bachelor of Science, Bandung Institute of Technology (ITB)</b> #1 Science & Engineering school in Indonesia Telecommunication Engineering; Overall GPA: 3.73/4.0, Major GPA: 3.74/4.0	Bandung, Indonesia <i>Jul '19 - Jul '24</i>
<b>Erasmus+ Student Mobility Programme, University of Zagreb</b> Faculty of Electrical Engineering and Computing, Full-ride scholarship from the EU	Zagreb, Croatia <i>Feb '22 - Jul '22</i>

## SELECTED PUBLICATIONS

<b>CONCIERGE: Towards Accuracy-Driven Bandwidth Allocation for Video Analytics Applications in Edge Network</b> <i>Yuyang Huang, Faishal Zharfan, Hendrawan Hendrawan, Haryadi S. Gunawi and Junchen Jiang</i> <i>2024 IEEE International Conference on Edge Computing &amp; Communications (EDGE '24)</i>	2024
<b>Modelling of Wireless OFDM System with Deep Learning-based Modulation Detection</b> <i>Rahmat Mulyawan, Faishal Zharfan, Muhamad Rizki Nur Rahman, Infall Syafalni, Nana Sutisna, Trio Adiono</i> <i>2022 International Symposium on Electronics and Smart Devices (ISESD '22)</i>	2022
<b>Comparison of Caching Replacement Policies in Changing the Number of Interest Packets on Named Data Networks Using Mininet-NDN</b> <i>Faishal Zharfan, Larastya Devindira Hasnaa, Nana Rachmana Syambas, Ridha Muldina Negara</i> <i>15th International Conference on Telecommunication Systems, Services, and Applications (TSSA '21)</i>	2021

## RESEARCH EXPERIENCES

<b>International Undergraduate Research Collaboration on Video Analytics</b> <i>Undergraduate Research Assistant</i>	<i>Oct '22 - Jul '24</i>
<ul style="list-style-type: none"><li>Collaborated with <b>Prof. Junchen Jiang</b> of the University of Chicago and <b>Prof. Hendrawan</b> of Bandung Institute of Technology</li><li>Implemented <b>Concierge</b>, an accuracy-sensitivity based resource allocator designed for maximizing object detection systems performance under limited resources</li><li>Successfully <b>improved the average f1-score</b> of DDS and AWStream by <b>10%</b> as well as <b>optimized</b> DDS and AWStream <b>processing performance</b> by <b>50%</b></li><li>Supported by the MoECRT Garuda Open Research Program.</li></ul>	
<b>Undergraduate Research Collaboration on Mobile EEG</b> <i>Undergraduate Research Assistant</i>	<i>Jul '23 - Jun'24</i>
<ul style="list-style-type: none"><li>Collaborated with <b>Wervyan Shalannanda</b> of Bandung Institute of Technology</li><li>Designed an early seizure detection system frontend utilizing <b>EEG electrode cap</b>, <b>Open BCI Cyton Board</b>, and <b>Raspberry PI</b></li><li>Analyzed the <b>E2E data transmission delay</b> of the system under 3 network conditions (LAN, 2 Subnets, Cloud)</li></ul>	
<b>Undergraduate Research Collaboration on DL for 5G Communications</b> <i>Undergraduate Research Assistant</i>	<i>Apr '22 - Dec '22</i>
<ul style="list-style-type: none"><li>Collaborated with <b>Prof. Trio Adiono</b> and <b>Rahmat Mulyawan</b> of Bandung Institute of Technology</li><li>Designed a smart wireless OFDM system with deep learning-based modulation detection</li><li>Successfully <b>achieved 91.375%</b> of accuracy through experiments by utilizing Adalm Pluto</li><li>Supported by Riset ITB-Young Researcher Grant 2022</li></ul>	

## TEACHING

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

## INDUSTRY EXPERIENCES

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

## COMPUTER SCIENCE SKILLS

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Programming Languages	Python, Go, C, C++, MATLAB
Operating Systems	Linux, Unix, Shellsript
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

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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

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**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

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**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

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**Junchen Jiang**  
Assistant Professor  
University of Chicago  
junchenj@uchicago.edu

**Hendrawan**  
Full Professor  
Bandung Institute of Technology  
hend@stei.itb.ac.id

**Wervyan Shalannanda**  
Assistant Professor  
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