

# Adil Bin Bhutto

RESEARCHER, IPLAB, NAIST, JAPAN  
<https://iplab.naist.jp/members/>

Laboratory for Cyber Resilience  
Information Science Division, Nara Institute of Science and Technology  
Building A, Division of Information Science, 3rd floor  
8916-5 Takayama, Ikoma, Nara 630-0192, Japan  
Email: [adil-b@ieee.org](mailto:adil-b@ieee.org)  
Webpage : <https://abbhutto.com>  
Github : <https://github.com/binbhutto>  
+81-80-4475-9101 (Japan) | +91-96-133-54620 (India)

---

## EDUCATION

**MSC. Information Science (By Research)** 2022 - 2024  
Thesis title: Performance Challenges in Containerized Networking: Latency, Jitter, and Bandwidth Beyond 5G  
Nara Institute of Science and Technology, Japan  
Grade: 4/4

**Bachelor of Technology** 2017 - 2021  
General 4-year degree in Computer Science and Engineering  
Tezpur Central University, India  
Grade: 8.5/10

---

## RESEARCH INTERESTS

System Software, Networking, Machine Learning  
Anomaly Detection, Distributed Systems

---

## PUBLICATIONS

**Adil Bin Bhutto**, Ryota Kawashima, Yuzo Taenaka, and Youki Kadobayashi. "Meeting Latency and Jitter Demands of Beyond 5G Networking Era: Are CNFs Up to the Challenge?." In 2024 IEEE 48th Annual Computers, Software, and Applications Conference (COMPSAC), pp. 1598-1605.

**Adil Bin Bhutto**. "Performance Challenges in Containerized Networking: Latency, Jitter, and Bandwidth Beyond 5G". MA thesis. Japan: Nara Institute of Science and Technology, 2024. URL: <https://library.naist.jp/opac/en/book/111657>.

Pratyush Kr. Deka, Yash Verma, **Adil Bin Bhutto**, Erik Elmroth, and Monowar Bhuyan. "Semi-supervised Range-based Anomaly Detection for Cloud Systems." In: IEEE Transactions on Network and Service Management(2022), pp. 1–1.doi:10.1109/TNSM.2022.3225753.

**Adil Bin Bhutto**, Xuan Son Vu, Erik Elmroth, Wee Peng Tay, and Monowar Bhuyan. "Reinforced Transformer Learning for VSI-DDoS Detection in Edge Clouds." In: IEEE Access 10 (2022), pp. 94677–94690.

---

## AWARDS & ACHIEVEMENTS

Received a full scholarship of **3.5 Million Yens (JPY)** from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, for a span of two years to do my master's and conduct research.

---

## EXPERIENCE

**Researcher** 2024 - Present  
iPlab, Nara Institute of Science and Technology, Japan  
I am conducting research on low latency/jitter user space packet processing within containerized network functions, aiming to advance the next generation of compute interconnect technology.

**Research Assistant** 2022 - 2024  
ICSCoE, IPA, Ministry of Economy, Trade and Industry, Japan  
I conducted research on enhancing core network technology to optimize performance using generic hardware processor architecture for network function virtualization.

**Remote Staff Engineer** 2022 - 2024  
Ovvy (<https://ovvy.ai>), Delaware, United States  
Lead the MLOps team for real estate image editing. We developed fundamental AI models and applied theoretical knowledge and state-of-the-art computer vision advancements to automate image editing. In my role, I was responsible for conducting training on custom AI models to improve their performance, as well as overseeing their deployment to manage millions of requests.

### Visiting Researcher

Autonomous Distributed Systems Lab, Umeå University, Sweden 2021 - 2022  
I worked on developing fundamental methods for network anomaly detection using machine learning and data science. Worked on multiple research papers with international collaborations. It was supported by WASP project under Knut and Alice Wallenberg Foundation.

### Research Intern

HydroSense Research Lab, Dept. of Civil Engineering, IIT Delhi, India 2020 - 2020  
Used Sentinel-1 SAR satellite data to measure Indian river width on Google Earth Engine Platform and designed a web dashboard using LeafletJS, AWS, and Django to visualize crowd-sourced landscape data.

### Research Intern

Center for Cognitive Computing Lab, IIIT Allahabad, India 2019 - 2020  
Worked on UI design and did a web-based implementation, which involved the deployment of machine learning models using Flask API, handling physical servers, VPN tunneling over proxy, and back-end and front-end coding.

---

### COMMUNITY SERVICE

• Reviewer for Computer & Security Journal • PC Member of IEEE AI Test 2024 Conference

---

### REFERENCES

#### Dr. Youki Kadobayashi

(Main Supervisor of Master's Program)

Professor at Cyber Resilience Lab

Information Science Division, NAIST

8916-5 Takayama, Nara 630-0192, Japan

jouki-k@is.naist.jp

#### Dr. Ryota Kawashima

(Co-supervisor and Research Collaborator for Master's Program)

Associate Professor at Graduate School of Engineering

Nagoya Institute of Technology

Gokiso-cho, Showa-ku, Nagoya, Aichi, 466-8555, Japan

kawa1983@nitech.ac.jp

#### Dr. Yuzo Taenaka

(Co-supervisor of Master's Program)

Professor at Cyber Resilience Lab

Information Science Division, NAIST

8916-5 Takayama, Nara 630-0192, Japan

yuzo@is.naist.jp

#### Dr. Nityananda Sarma

(Supervisor for Bachelor Project)

Professor at Department of Computer Science & Engg.

Tezpur University, Assam 784 028, India

nitya@tezu.ernet.in

---

### COMPUTER SKILLS

Languages: C, C++, Python, JavaScript, NodeJS, Bash, SQL,  $\LaTeX$ , Assembly

Common tools & Software Packages: DPDK, Docker, Flask, HTML/CSS, React, Vim, Tmux

Research tools: TensorFlow, Keras API, Scikit-Learn, Numpy, Pandas, Matplotlib

Familiarity with hyperscalers: Google Cloud Platform (GCP), Amazon Web Services (AWS)

---

### LANGUAGE SKILLS

English (Fluent), Hindi (Native speaker), Assamese (Native Speaker), Bengali (Fluent), Arabic (Reading and greetings), Sanskrit (Reading and greetings)

---

### EXTRA INTERESTS

**Hobbies:** Reading, Cooking, and Play Badminton