Avik Kar

CONTACT

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Phone: 7044789982

LINKS

Github:// **avik-kar**
LinkedIn:// **karavik18**

COURSEWORK

GRADUATE

Optimization
Random Processes
Reinforcement Learning
Real Analysis
Stochastic Dynamics and Stochastic Control
Deep Learning
Statistical Signal Processing
Digital Image Processing
Advanced Matrix Theory and Linear Algebra
Embedded Systems

UNDERGRADUATE

Linear Algebra
Probability Theory
Signals and Systems
Control Systems
Digital Signal Processing
Analog Communication
Digital Communication

TEACHING ASSISTANCE

- Instrumentation Design System, IIT Kharagpur
- Measurements & Electronic Instruments Lab., IIT Kharagpur
- Random Processes, IISc

SKILLS

PROGRAMMING

Over 10000 lines:
Python • LaTeX
Over 1000 lines:
C • C++ •
Familiar:
MATLAB • HTML • CSS • Java

PERSONAL STATEMENT

I am working with Prof. Rahul Singh as a Ph.D. Student at ECE, IISc and looking for funding for my research on stochastic control and reinforcement learning for systems.

EDUCATION

2021-Present **Doctor of Philosophy**
Dept. of Electrical Communication Engineering
Indian Institute of Science, Bangalore
Current CGPA: 9.5

2019-2021 **Master of Technology**
in Electrical Engineering
with specialization in Instrumentation and Signal Processing
Indian Institute of Technology Kharagpur, India
CGPA: 9.19
Thesis: Federated Learning with Weakly Labelled Data

2013-2017 **Bachelor of Technology**
in Electronics and Communication Engineering
St. Thomas' College of Engineering and Technology, India
CGPA: 8.54
Thesis: Microstrip Line Implementation of X-band Microwave Filter

RESEARCH

KHARAGPUR LEARNING, IMAGING & VISUALIZATION (KLIV) RESEARCH GROUP | Student Member

May 2020 – April 2021 | Kharagpur, WB

Worked with **Prof Debdoot Sheet** to assess computational and space complexity of deep neural networks during training and inference. • Worked with **Dr Arunava Chakravarty** and **Prof Debdoot Sheet** to build a federated learning framework for site-aware chest radiograph screening. • Led the development of a federated learning framework for semantic segmentation of medical images of different modalities.

EXPERIENCE

NOMURA RESEARCH INSTITUTE FINANCIAL TECHNOLOGY INDIA

Associate Software Engineer
Aug 2017 – May 2018 | Kolkata, WB

Worked in project of building Broker Back-office Platform. Learned Test Automation with Selenium and SQL database, Data Migration.

AWARDS AND ACHIEVEMENTS

2021 Received **Keshab K Parhi Endowment Prize** for **best application oriented thesis** among M.Tech. graduating EECS students of IIT Kharagpur.
2020 Ranked 216 (99.74%ile) in Graduate Aptitude Test in Engineering
Paper: Electronics and Communication Engineering

PUBLICATIONS

1. A. Chakravarty, A. Kar, R. Sethuraman and D. Sheet, "Federated Learning for Site Aware Chest Radiograph Screening," *2021 IEEE 18th International Symposium on Biomedical Imaging (ISBI)*. IEEE, 2021.