

AADI SWADIPTO MONDAL

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EDUCATION

University of Wisconsin - Madison , Wisconsin, United States	2021 – 2023
MS (Hons.) in Computer Science	GPA - 4.00/4.00
Indian Institute of Technology (IIT) Kharagpur , West Bengal, India	2017 – 2021
B.Tech (Hons.) in Electronics and Electrical Communication Engineering	CGPA - 9.36/10
Minor in Computer Science and Engineering	

PROFESSIONAL EXPERIENCE

Software Engineering Intern Google	May'22-Aug'22
Worked on VM-to-VM connection reliability in the Andromeda Software Defined Networking (SDN) Stack of Google. Added more than thousand lines of code in the production code-base consisting of more than one million lines of code. Added 12 new features related to telemetry and test coverage. Introduced new monitoring capabilities and helped in early bug detection and resolution. C++ for core implementations and Python for visualization and monitoring.	
Android Developer Intern Jarvis Strategy and Consulting	Mar'21-Jun'21
Developed an android app for on-ground survey by agents facilitating data collection using <i>Kotlin</i> and <i>Model-View-View-Model (MVVM)</i> architecture. Implemented a renovated UI/UX and expanded app capabilities to work offline and sync up when back online. Used state-of-the-art tools like <i>Retrofit</i> for network calls and <i>Android Room</i> for offline data storage.	
Software Developer Intern Honeywell Connected Enterprise (HCE)	Jun'20-Jul'20
Developed visualization platforms for time-series data of <i>Atlassian JIRA & Confluence</i> from <i>InfluxDB</i> using <i>Grafana</i> and <i>ReactJS</i> . Deployed software on <i>Continuous Integration Continuous Development (CICD)</i> pipeline using <i>Atlassian Bit-bucket</i> , <i>Octopus</i> , and <i>Open-Shift</i> . Learned about <i>Docker containers</i> and <i>Kubernetes</i> .	

RESEARCH EXPERIENCE

Research Assistant Analysis of DNS records	Aug'21-Present
Advisor: Prof. Paul Barford Empirical analysis of DNS structure, behavior and performance using novel data sets and techniques. The goal of this work is to develop broad and novel perspectives on <i>DNS</i> that lead to improvements in the systems and protocols used to configure, manage and secure the underlying infrastructure. Collaborators: Dr. Crovella and Dr. Sommers	
Research Intern UoA Sentiment Analysis of App Reviews in Google Play Store	Jun'20-Oct'20
Guide: Prof. Kaushal Kumar Bhagat and Prof. Nasser Giacaman Designed a <i>language model</i> based on <i>BERT</i> using <i>PyTorch</i> and <i>Transformers library</i> to systematically attach <i>sentiment labels</i> and <i>aspect labels</i> to the scrapped app reviews from Google Play Store. Compared the user dispositions of apps from different app categories to analyze the effectiveness of AR/VR for education in the form of android apps.	
Analysis of COVID-19 spread in India using mobility-aware graph-based models	May'20-Oct'20
Guide: Prof. Animesh Mukherjee, Prof. Mainack Mondal, and Prof. Abir De Developed a <i>mobility-aware multi-agent simulation driven method</i> for estimation of COVID-19 spread which intrinsically takes care of factors like mutation of virus strains, asymptomatic cases, and other latent conditions.	

SKILLS

- **Languages & Frameworks:** C++ | Go | Python | Java | ReactJS | Kotlin | Flask | Grafana | Docker
- **Databases & Others:** SQL | MongoDB | InfluxDB | Room | Firebase | Machine Learning

PUBLICATIONS

Evolution of Convolution Neural Network Architectures using Genetic Algorithm	2020
Published in 2020, <i>IEEE Congress on Evolutionary Computation (CEC)</i>	[PDF]
Two-Sided Fairness in Non-Personalised Recommendations	2020
Published in <i>AAAI Conference on Artificial Intelligence, 2021, Student Abstract</i>	[PDF]

COMPETITIONS

Ves-AI-Thon by Capgemini	Jul'18
Developed an android app for elderly care with in-app <i>emotion detector (Amazon Rekognition API)</i> and integrated <i>intelligent chat-bot (IBM Watson)</i> . Got featured in news/media body like <i>India Today</i> , <i>The Hindu</i> , <i>Hindustan Times</i> , etc.	