ANIKET ANAND

https://aanand2300.github.io/
+1 (404) · 510 · 0520 ⋄ a.anand@gatech.edu

EDUCATION

Georgia Institute of Technology *expected May 2023*
M.S. in Computer Science
Specialization in Computing Systems
Overall GPA: 4.00

Indian Institute of Technology (BHU) *Jul 2020*
B.Tech in Ceramic Engineering
Cumulative GPA: 9.34/10

RESEARCH INTEREST

Internet Measurement, Blockchain, Wireless Networks, Security and Privacy

PUBLICATIONS

- **Anand, Aniket**, Waqar Asif, and Marios Lestas. "Performance Evaluation of PoW Blockchain in Wireless Mobile IoT networks." In 2021 17th International Conference on Distributed Computing in Sensor Systems (DCOSS), pp. 396-403. IEEE, 2021.
- **Anand, Aniket**, Antonino Galletta, Antonio Celesti, Maria Fazio, and Massimo Villari. "A secure inter-domain communication for IoT devices." In 2019 IEEE International Conference on Cloud Engineering (IC2E), pp. 235-240. IEEE, 2019.
- Gupta, Swati, Ravi Shankar Singh, and **Aniket Anand**. "Cloudlet Scheduling using Merged CSO algorithm." In 2018 Fifth International Conference on Parallel, Distributed and Grid Computing (PDGC), pp. 278-283. IEEE, 2018.

TEACHING EXPERIENCE

Graduate Teaching Assistant (GTA) Jan 2022 - Present
Online CS 6601 Artificial Intelligence, Georgia Tech *773 students, 22 TAs*

· Conducting weekly Office Hours for students to clarify conceptual doubts and doing code reviews
· Addressing assignment-related and class-related questions from students on Ed-Discussions weekly
· Responsible for floating an assignment on Hidden Markov Models (out of total 6 assignments)
· Brainstorming and formulating exam questions for Mid-term and Finals and grading exams

SCHOLASTIC ACHIEVEMENTS AND ACCOLADES

· Nominated for Sahaj Memorial Award of AIPMA for best student in Ceramic Engineering (2020)
· Selected among 35 students from India for NTU-India Connect Research Internship (2019)
· Invited by Hasura for onsite Product Development Fellowship (2017)
· Secured All India Rank within top 4% in JEE-Advanced out of 200,000+ aspirants (2016)
· Achieved All India Rank within top 0.8% in JEE-Main out of 1.2 million+ aspirants (2016)
· Secured a top 300 spot in National Standard Examination in Junior Science (NSEJS) (2013)

KEY RESEARCH AND TECHNICAL PROJECTS

Detecting Internet Outages in Residential Networks Jan 2022-ongoing
Prof. Alberto Dainotti, Georgia Tech

· Identifying the major ASNs and organization providing residential internet access on varying geographic locations using wide-scale active probing

Evaluation of Secure ML Systems using a Classification Task Sept 2021 - Dec 2021
Prof. Ada Gavrilovska & Dr. Ketan Bhardwaj, Georgia Tech *Presentation*

· Evaluated the performance of open-source multi-party computation (MPC) systems: CrypTen and Falcon over classification of handwritten images done by trained LeNet model over MNIST dataset
· Obtained 96.875% accuracy with Falcon and 9.375% accuracy with CrypTen for 3-party secure inference on the same validation dataset. Other results include inference time, send/receive calls and data

Performance Evaluation of Blockchain in Intermittent Network May 2020 - Mar 2021
Prof. Marios Lestas (Frederick University) & Dr. Waqar Asif (University of West London) *Paper*

· Simulated Proof of Work blockchain instances with wireless and mobile nodes using ns-3 simulator
· Analyzed performance of blockchain instances varying various network and blockchain parameters and performing analytics analysis to find the optimal instance in constrained network connectivity

Blockchain-based System for Air Traffic Flow Management May 2019 - Jul 2019
Dr. Ta Nguyen Binh Duong, NTU Singapore *Report*

· Established a Hyperledger Fabric network on 5 lab servers, implemented Q-learning algorithm on Chaincode for aircraft delay minimization and used voting heuristics to aggregate the optimal model
· Achieved around 15% reduction in system penalty (inversely proportional to ground and in-air delay) and the delays converged 33% faster when executed for 1000 local training iterations with 10 votings

Advanced Techniques for Osmotic Computing Jun 2018 - Nov 2018
Prof. Massimo Villari, University of Messina *Paper*

· Generated RSA public-private key pair and Certificate Signing Request (CSR) in ESP32 (acting as data producer) for its authentication and processed sensor data to JWS Compact Serialization for encryption
· Configured instances of a Certificate Authority in Docker container by OpenSSL for signature and in smartphone (consumer) for verification of securely transmitted X.509 Public Key Certificates

An Efficient Algorithm for Cloudlet Scheduling Feb 2018 - May 2018
Prof. Ravi Shankar Singh, IIT (BHU) *Paper*

· Contrived a mapping of processors to tasks by systematically combining the advantages of Particle Swarm and Cat Swarm Optimization algorithms and simulated the allocation on CloudSim simulator
· Achieved 20% reduction in execution time without an increase in cost and a lowered randomness error

RELEVANT COURSES UNDERTAKEN

Grad-level: Internet Data Science (CS 8803), Programming Languages (CS 6390), Distributed Computing (CS 7210), Reliability and Security in Computer Architecture (CS 7292), Artificial Intelligence (CS 6601)
Undergrad: Network Security (CSE 537), Natural Language Processing (CSE 443), Operations Research (CSO 324), Computer Programming (CSO 101), Mathematical Methods (MA 203)

TECHNICAL SKILLS

Languages: C, C++, Python, Golang, Solidity
Technologies Used: Intel-SGX, ns-3, Docker, OpenVPN, Hyperledger Fabric