Sai Rahul Rachuri

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Nygaard 286, Department of Computer Science, Åbogade 34, 8200 Aarhus, Denmark

Education

Aarhus University, Denmark 2019 - Present
Ph.D. in Computer Science
Advisors: Peter Scholl and Claudio Orlandi

International Institute of Information Technology, Bangalore 2014 - 2019
Integrated Master's (Bachelor's + Master's) in Information Technology
CGPA : 3.2/4

Publications

Conferences:

- Daniel Escudero, Satrajit Ghosh, Marcel Keller, **Rahul Rachuri**, and Peter Scholl, Improved Primitives for MPC over Mixed Arithmetic-Binary Circuits, *CRYPTO 2020* PDF
- **Rahul Rachuri**, Ajith Suresh, Trident: Efficient 4PC Framework for Privacy Preserving Machine Learning, *NDSS 2020* PDF
- Seetarama Raju Pericherla, **Rahul Rachuri**, Shrisha Rao, Modeling Confirmation Bias Through Egotism and Trust in a Multi Agent System, *IEEE SMC 2018* PDF

Workshops:

- Daniel Escudero, Matthew Jagielski, **Rahul Rachuri**, Peter Scholl, Adversarial Attacks and Countermeasures on Private Training in MPC, *PPML-NeurIPS 2020*

Professional Activities

External Reviewer:

- CRYPTO 2020, ACM CCS 2020, ASIACRYPT 2020

Research Experience

- Worked under Prof. Ashish Choudhury to build efficient multi-party computation protocols for privacy-preserving machine learning as a part of my masters thesis : Sept '18 - May '19
- Interned at the Bar-Ilan University, Israel as a part of the International Summer Program/Internship in Applied MPC and Implementations program : June '18 - July '18
- Took part in a reading group in the Cryptography and Information Security Lab (CrIS) at the Indian Institute of Science, exploring privacy-preserving technologies : Aug '17 - April '18

Teaching Experience

Teaching Assistant:

- Computability and Logic at Aarhus University : Spring '20
- Cryptology : Fall '19
- Machine Learning : Fall '19
- Foundations of Cryptography : Fall '18
- Introduction to Automata Theory and Computability at IIIT B : Spring '18

Course Projects

- **IP Management System Portal** : Oct '16 - Dec '16
  Course: Database Systems *Prof. Srinath Srinivasa*
  An intra-college Intellectual Property Management System, which efficiently manages patent, licensing and royalty claims for projects and products worked on by members of the university. A web app was designed with different views for different users, such as Student, Faculty, IP Committee or a Guest.
  Software and tools used: Ruby on Rails, MySQL, HTML, CSS
- **LED Matrix Display** : March '15 - April '15
  Course: Basic Electronics *Prof. Madhav Rao*
  Built a 24x6 LED matrix display controlled by an Arduino which displays scrolling text based on the input given.
  Software and tools used: Arduino board and IDE, LEDs and soldering equipment

- **Battleship** : Nov '14 - Dec '14
  Course: C Programming *Prof. Madhav Rao*
  Built a game of battleship where the player plays against the computer. The computer has some AI built into it that analyses the output of its previous move to decide the next one.
  Software and tools used: C language
- **DNA Sequence** : March '16 - April '16
  Course: Design and Analysis of Algorithms *Prof. Meenakshi D'Souza*
  The problem was to find the sequences in DNA on a given sample. We accomplished this using a Trie data structure. Time complexity achieved - O(nR) where R = sequence number of the DNA sequence and space complexity - O(length of the DNA sequence).
  Software and tools to be used: C++ language

Technical Skills

Programming Languages: C, C++, Python, Java, NetLogo
Others: Git, LaTeX, Docker, Valgrind

Language Proficiency

- English - Fluent
- Telugu - Native
- Hindi - Intermediate