

Agila Senthil Kumar

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EDUCATION

Arizona State University

Master of Science in Computer Engineering, CGPA : 4.00/4.00

Tempe, AZ

Aug 2022 - May 2024

Coursework: Foundations of algorithms, Advanced Computer Architecture, Spatial Data Science, Data Mining

National Institute of Technology Trichy

Bachelor of Technology in Electronics and Communication Engineering

Tiruchirappalli, India

Jul 2017 - Jun 2021

Coursework: Data structures, Computer Networks, Network Security, Computer Architecture and Organisation

EXPERIENCE

Arizona State University, ASCS Lab, STAM Center

Research Intern - Project Hecate

Tempe, AZ

June 2023 - Present

- Conducting in-depth research on quantum's impact on classical secure computing and post-quantum protocols, while developing innovative hardware-efficient algorithmic modifications for secure systems in the quantum era.
- Performing thorough cryptanalysis to assess the security implications of the proposed algorithmic and hardware implementations, thereby providing valuable insights into the robustness and reliability of post-quantum security measures.

SAP

Associate Software Developer

Bangalore, India

July 2021 - June 2022

- Enhanced data collection procedures with visualization tools like Seaborn and Matplotlib and using libraries like Pandas and Numpy.
- Ensured smooth access of web application with AngularJS for front end, Java for backend system and HANA database.
- Incorporated scripts using Groovy and Java to aggregate XML test results and provided a continuous integration service in order to automate and generated a report of the results using Katalon Studio.

BITS Pilani - Software Defined Networking Lab, CS Department

Research Intern

Rajasthan, India

May 2020 - July 2020

- Worked with Prof Dr.Amit Dua in proposing a new algorithm using Game Theory on the basis of bandwidth for scheduling and allocation of the Physical Resource Blocks in machine to machine communications with the data rate as per Nash Equilibrium.
- Adopted Coalition game-theoretic technique to analyze the behaviour of the machines and self-value of coalition is induced to calculate payoff for the machines by using bankruptcy game with ns3 used for implementation.

Homefills Pvt.Ltd.

Web Development Intern

Odisha, India

Dec 2019 - Feb 2020

- Collaborated with an agile team structure in deploying a commercial and highly interactive functional website.
- HTML, CSS, Javascript, NodeJS and MongoDB (Express Framework) was used for the full stack development of website.

TECHNICAL SKILLS

Programming: Kotlin, Java, SQL, C, C++, Python, JavaScript, Spark, CSS, Angular, Groovy, R, MATLAB, Django, GCP

Frameworks and Tools: Tensorflow, Kubernetes, AndroidSDK, Spring, Node.js, MongoDB, ReactJS, AWS, Apache Sedona, Pandas

PROJECTS

Optimisation of photonic crystal encoder and decoder | Under the guidance of Prof Dr.Thavasi

Bachelor's Thesis

- Achieved an accuracy of 97.06 and minimised the loss to 0.0056 in predicting the outputs of different integrated nano photonic coupled ring resonators by introducing OFDM and a multi layered perceptron regression algorithm

Evidence Digitalization | Under the theme "Crime Free Bharat"

Smart India Hackathon' 2020

- Developed a law enforcement portal for digitalization (Text extraction from hand-written documents using OCR) of evidence in various forms and storage of its hash value in a blockchain to identify tampering, thereby dynamically generating a certificate for the admissibility of the evidence (written or oral) during prosecution and NLP was used to extract important information.

NITT PayApp | Android Application

TransfiNITTe' 2019

- Devised an integrated NIT Trichy centric payment application using Nodejs and Android for vendors inside campus and students to enable easy payments through smart location based services which also displays the live location of auto rickshaws.
- The transaction is collected and analyzed to give the user, vendor and administration.

ACHIEVEMENTS

Smart India Hackathon' 2020, Software - Winners out of 0.5 million participants all over India, conferred by Prime Minister, India

TransfiNITTe' 2019, Software - Intra NIT Trichy Hackathon - Second place out of 250+ teams

NIT Conclave'2018, Overall and Technical Module - Winners out of all the 31 NITs of the country.