

Srinivasa Arun Yeragudipati

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EDUCATION

Purdue University, West Lafayette, IN, USA
M.S. in Computer Science

August 2021 - May 2023
GPA : 3.6/4.0

Anna University, Chennai, TN, India
B.E. Computer Science and Engineering

August 2017 - May 2021
CGPA : 8.6/10.0

COURSEWORK

Software Engineering, Statistical Machine Learning, Natural Language Processing, Computer Networks, Cryptography, Algorithm Design and Analysis, Object-Oriented Analysis and Design, Database Management Systems

SKILLS

Programming Languages Python, Java, C, C++, SQL
Frameworks and Tools Django, Postman, MongoDB, REST APIs, git, AWS

WORK EXPERIENCE

Graduate Teaching Assistant - [Purdue University, West Lafayette](#)

August 2022 - December 2024

- Instructed and led teams of 40+ students in the design, implementation, and deployment of full-stack Java applications.
- Debugged and optimized student-submitted codebases, achieving up to 30% performance improvement and ensuring 100% unit test coverage for assigned projects.

Graduate Research Assistant - [Purdue Blockchain Lab, West Lafayette](#)

January 2022 - August 2022

- Researched cryptographic algorithms for securely evaluating Boolean circuits, improving communication efficiency by 90%, and ensuring protection against data leaks.
- Collaborated with professors from Bar-Ilan University to design secure solutions using techniques from Secure Multi-party Computation.

INTERNSHIPS

IT Internship - [TVS Electronics, Chennai](#)

June 2020 - August 2020

- Built a video calling application with augmented reality to assist engineers in guiding customers through machine repairs using interactive 3D models.
- Integrated Daily.co API for seamless video calling functionality, combined with Three.js for AR features and React.js for frontend development, demonstrating expertise in full-stack development and API integration.

Student Internship - [National Centre for Coastal Research, Chennai](#)

June 2019

- Developed robust survey systems for flood-hit regions, ensuring high availability and performance under limited internet connectivity.
- Implemented offline data collection pipelines using OpenDataKit, integrated with cloud-based storage, and utilized Google Sheets as a backend for seamless data processing and management.

PROJECTS

Secure Single Sign-On (SSO) System API

- Developed a secure SSO API using Node.js with Express, enabling seamless authentication and improving user experience.
- Implemented secure password storage with MongoDB, using salting techniques (public and private) to reduce attacker efficiency by 99.6%.
- Designed and tested the API endpoints with Postman, ensuring 100% functionality and fast response time.

Public Key Infrastructure (PKI) System API

- Developed a PKI system using Django and MongoDB for managing digital certificates.
- Built RESTful APIs for RSA key generation, submitting Certificate Signing Requests (CSRs), and issuing X.509 certificates.

Open-Source Contributions on GitHub

- Contributed to SymPy and Intermine repositories, improving functionality, adding features and resolving issues within the codebases.
- Added functionality to Intermine's Python webservice client to fetch session tokens, improving efficiency of API interaction
- Implemented tests to ensure code coverage for new features in SymPy, contributing to CI processes and maintaining project quality standards.

Reproducing TCP Fast Open using AWS EC2

- Conducted a comprehensive performance evaluation of the TCP Fast Open (TFO) protocol on AWS EC2 instances.
- Implemented a Mininet topology to simulate network delays and developed a Python-based web server setup to measure reduced latency.

ImageCLEF Tuberculosis Challenge

- Developed a deep learning model using PyTorch to analyze 3D CT images of lungs and predict tuberculosis probability.
- Implemented 3D CNNs and later optimized the approach by projecting 3D images into 2D to improve performance by 60%.

Advertisement Popularity Prediction

- Predicted advertisement popularity 24 hours post-publication using sklearn, NumPy, and Pandas libraries.
- Achieved 4th place out of 20 teams, at the OLX JARVIS AI Hackathon, held at Shastra, IIT Madras Technical Fest.