

SAGAR ABHYANKAR

Urbana-Champaign, Illinois

 Sagar Abhyankar |  Portfolio |  SagarA |  sagarabhyankar18@gmail.com

EDUCATION

Master of Computer Science

August 2024 - December 2025 (Expected)

University of Illinois at Urbana-Champaign

Course Assistant for CS222

Relevant Coursework : CS 411, CS 440, CS 425

Bachelor of Engineering - Computer Engineering

July 2020 - June 2024

Pune Institute of Computer Technology

CGPA: **9.38**

Relevant Coursework : Theory of Computation, Data Structures and Algorithms, Artificial Intelligence, Distributed systems, Computer Networks and Security, Cyber Security and Digital Forensics

INTERNSHIPS

Reverie Language Technologies

Bengaluru, Karnataka, India

AI Researcher

Aug 2023 - Mar 2024

- R&D of real time state-of-the-art noise cancellation software using deep learning for Indic Languages.
- Curated Datasets, trained large models with novel architectures, the research carried out won at PICT's InC'24 hackathon.

Newton's Apple

Pune, Maharashtra, India

Lead Security Software Development Intern

Aug 2023 - Feb 2024

- Developing the flagship line-up of cyber security products and services.
- Includes tools such as Phishing Simulators, Vulnerability Assessment and Penetration Testing.
- Led and mentored a team of six interns in designing and implementing system architectures.

Mastercard

Pune, Maharashtra, India

Cyber Security Intern (SOC)

May 2023 - Jul 2023

- Developed a Scalable Rapid Incident Response System reducing the response time from days to minutes.
- Built an automated tool arsenal for analyzing Forensic Artefacts, saving SOCIR dept. 2000+ hours yearly
- Explored diverse cyber threat hunting solutions

Bajaj Finserv

Pune, Maharashtra, India

SDE Intern

March 2023 - May 2023

- Created a Cryptocurrency eco-system called Bajaj Coin using on premise linux nodes.
- Setup private blockchain network using go-ethereum, along with a compliance backup database.

PyBots LLC

Bengaluru, Karnataka, India

SDE Intern

Feb 2022 - Jan 2023

- Built the entire feature-rich flagship desktop application used by 100's of customers.
- Developed comprehensive unit tests and documentation for the sizable and intricate application.
- Developed RPA technologies for nextgen healthcare (client)
- Additionally, an Electron-based version of the app, originally implemented in Flutter, was also developed

Pustakwaale

Pune, Maharashtra, India

SDE Intern - Analytics Team

Jan 2022 - May 2022






- Analyzing and Graphing the past visiting data
- Recommending an AI generated schedule for booking exhibitions across Pune City
- Implemented scheduling led to a consistent month-over-month profit increase of up to 8%.
- Prioritized pop-up store sites based on multiple real world parameters

- Developed a fast face Recognition & Facial Similarity Scoring Model using tensorflow framework.
- Handled the storage of images used for face pattern matching in Mongo DB Atlas.

TECHNOLOGIES AND FRAMEWORKS

- Docker, Kubernetes, .NET, Linux, Git, Flutter, Electron, Next.js, Node.js, AWS, MongoDB, MySQL, DynamoDB, PostgreSQL, Firebase, Django, and more.

PROJECTS

- Smart India Hackathon 2022** | Runner's Up |  link Jul 2022 - August 2022
- Served as the team's technical head, developed server-less architecture using AWS lambda and AWS API gateway to upload the images capable of handling around 1000+ requests per minute.
 - Built a fully functional mobile application using flutter for image uploading life cycle and light weight image quality enhancer on the server which runs on canny edge detection with added customization.
- Rusty Vault** |  link Jul 2023 - Aug 2023
- A highly secure, simple to use and performant local password manager desktop app written using Rust
 - Uses sound cryptographic security fundamentals to safeguard against brute force attacks
- Beluga Interpreter** |  link Jan 2023 - Feb 2023
- Designed an esoteric language to directly interpret and run turing machines with standard TM notation as syntax
 - Written in pure C++, supports features for combining multiple infinite tape turing machines
- Research Paper Rater** |  link Feb 2023 - Mar 2023
- A mini project implemented to rate research papers objectively
 - The application used web scraping and journal/conference rankings to score the paper.
- SuperFit** |  link May 2021 - Jul 2021
- Project for camera based body size scanning for online apparel shopping.
 - Developed a Model (web application) that generated a mask for the torso to estimate the clothing size for the person without needing physical measurement

RESEARCH EXPERIENCE

- **Integration of logical features with neural networks for controlled vs uncontrolled fire classification: a comparative study** *Published*
 - * Indian Journal Of Computer Science And Engineering Volume 14 Issue 4 ,2023
- **Exploring Speech Enhancement Models for Indic Language in Noisy Environments: A Benchmarking Study** *Complete, Unpublished*
- **A Survey on Enhancing Deep Learning Based Speech Recognition Systems using Noise Suppression Techniques** *Published*
- **Performance Analysis of Reinforcement Learning Algorithms on mitigation of Forest Fires** *Complete, Unpublished*
 - * Built an environment using Mujoco-world gen/cellular automata and trained AI agents using different reinforcement learning algorithms to analyze performance of subduing wildfires.
- **Homomorphic Encryption for privacy preserving machine learning** *Ongoing*
 - * Experimenting with Microsoft's SEAL and PySyft for evaluating performance on different machine learning models