# ARYAN JAIN

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## EDUCATION

**Purdue University, West Lafayette, IN**  *Aug 2021 – Dec 2024*
**Bachelor of Science in Computer Science**  **Cumulative GPA: 3.98 / 4.00**

Relevant Coursework: Computer Networks, Software Testing, Computer Security, Operating Systems, Analysis of Algorithms, Cryptography, Information Systems, Systems Programming, Data Structures and Algorithms, Computer Architecture

Teaching Assistantships: CS 251 - Data Structures and Algorithms, CS 252 - Systems Programming

Scholarships: Boeing 2024, Qualcomm 2023, Purdue CS 2022

## TECHNICAL SKILLS

**Languages**: Java, Python, C, C++, SQL, MongoDB, Cypher Query, ARM Assembly, Arduino, HTML, CSS, R
**Developer Tools**: Docker, Bash Script, Git, Unix, Linux, GCP, Agile Methodology, Flask

## WORK EXPERIENCE

**Cyber Security Intern**  **Jun 2024 – Jul 2024**
**Gurugram Police Department** | *Python, Steganography, RSA*  *Gurugram, India*

- Led development of an OSINT framework in a Telegram Bot using Selenium and Beautiful Soup, integrating 10+ data sources, utilizing techniques like Google Dorking for potential threat profiling within 10 secs.
- Architectured a secure evidence transfer system leveraging modern steganographic and encryption techniques (RSA, LSB, ZWC) to protect digital evidence, ensuring safe transmission and user-friendly interfaces for law enforcement.
- Constructed a desktop application to process over 20,000 IP addresses from IPDR files, conducting reverse DNS lookups and generating CSV reports using Python's Tkinter library and concurrent processing.

**Software Engineer Intern**  **May 2024 – Jun 2024**
**HCL Technologies** | *C++, MongoDB, Docker*  *Remote, India*

- Developed a C++ service using Curlcpp to retrieve real-time financial market data for major cryptocurrencies, enhancing data retrieval efficiency by 30%.
- Engineered a Docker-based deployment for MongoDB and Mongo Express, reducing setup time by 50% and enabling seamless data querying through a web admin interface.

**Software Engineer (Research Focus) Intern**  **Aug 2022 – Feb 2024**
**Rosen Center for Advanced Computing** | *Python, Benchmarking, Linux, Bash Scripts*  *West Lafayette, IN, USA*

- Implemented a novel framework using Microsoft Presidio and Python to automate the identification and anonymization of large system logs of 10,000+ lines under the mentorship of Dr. Amiya Maji.
- Performed different types of benchmarking using SLURM for High-Performance Linpack (HPL) and Stream and documented a guide on HPL benchmark usage.

**Software Developer**  **Aug 2022 – Dec 2022**
**Webee (Data Mine Learning Community)** | *Python, MongoDB, Pandas, CSV*  *West Lafayette, IN, USA*

- Collaborated with 10+ students to devise high-resolution beacon-based software for indoor asset tracking.
- Analysed and parsed 50+ GB datasets using Python CSV and performed triangulation and trilateration on the analyzed data for pinpointing locations of assets.

**Security Researcher**  **May 2022 – Aug 2022**
**Summer Undergraduate Research Fellowship** | *Python, Fuzzing, Unix, C, C++*  *West Lafayette, IN, USA*

- Created bash scripts and 5+ GitHub workflows to test a novel framework using AFL, uncovering security weaknesses in 80% of student programming submissions under the guidance of Prof. Aravind Machiry.
- Updated YAML files for testing and documented 5+ guides on the framework's functionality.

## PROJECTS

**Shell Implementation** | *C, C++, Lex, Yacc*  **Mar 2023 – Apr 2023**

- Created shell interpreter which combines behaviors from famous softwares including bash and csh.
- Incorporated 10+ common features of common shells such as line editing, signal handling, wildcarding, subshell, built-in function, file redirection, and more.

**Stock Market Simulator** | *Python, HTML, CSS, Flask*  **May 2020 – Aug 2020**

- Designed and developed a free web application to simulate trading for beginners to gain experience without money.
- Programmed 5+ features including personal portfolio, news, stock market data, and personalized stock tracker.