# Suhaas P Katikaneni

**Computer Science student from UChicago with 5 full-time industry internship experiences.**
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## EDUCATION

- **University of Chicago: Bachelor of Science in Computer Science,** (Expected: 12/2024) Courses: Data structures, Algorithms, Networking, OS, Databases, Data Science, Discrete Math, Honors Calculus; Analysis; Linear Algebra.
- Certifications: Deep Learning Specialization (Coursera and FAST AI); Cloud Technologies (Coursera); AWS.

## WORK EXPERIENCE

**MIT Lincoln Laboratory (www.ll.mit.edu/)** Boston, MA
*Technical Intern/Co-Op in the Secure Resilient Systems Group* Aug 2023 – Present

- Researched encryption algorithms and cryptographic key management. Implemented Enrollment over Secure Transport (**EST)** protocol for a cryptographic key management platform with **C++/Python**, **PostgreSQL** and **PKI**.
- Developed EST extensions to achieve 100% automation support for symmetric key use by clients, and to maintain Certificate Revocation Lists (CRLs) and Authority Revocation Lists (ARLs).

**Pegasystems Inc. (www.pega.com)** Boston, MA
*Software Engineering Intern* May 2023 – Aug 2023

- Developed customizable marketing apps in **Java** for Customer Decision Hub, resulting in 20% increased customer engagement. Utilized **Git, CI/CD, Docker, cloud-based infrastructure, data pipeline** and **predictive analytics**.
- Improved the performance of SQL query generation for different databases by 50% by adding innovative features.

**PayPal Inc. (www.paypal.com)** Chicago, IL
*Software Engineering Intern, Quality and Security Assurance* June 2022 – Aug 2022

- Developed automation software in **Python, Selenium, SQL** to test PayPal's Developer Platform & build pipelines.
- Created dashboards and KPI reports in **Power BI** to visualize and analyze large **datasets** for 20+ app perf data.
- Implemented improvements to the entry-writing **REST API** calls for PayPal Checkout to reduce latency by 45%.

**MITRE Corp. (www.mitre.org)** Bedford, MA
*Software Engineering Intern, Network Technology and Security* (Summers '20 & '21) June 2020 – Aug 2021

- Collaborated with a DoD project team to design and implement secure algorithms for wireless communications.
- Designed and implemented latency recording and 2 other features for a network emulation tool in **Python**.
- Investigated, architected and tested several **ML algorithms** for **time-series drift detection & anomaly detection**.

## PROJECTS

- **Buddy:** Developed a full-stack virtual teaching assistant application for CS education. The AI-assisted platform can help users embark on guided software projects with collaborators. It comes with a GPT powered chatbot which is dynamically fed data from learners' Git repository. Used Flask, MongoDB, Langchain, OpenAI, JS, Github APIs.
- **Reddit Topic Modelling:** Developed and executed a complex **deep learning algorithm** to analyze data from a subreddit, resulting in the identification of the most popular topic with an accuracy rate of 95%.
- **Webex Llama Chatbot:** Designed and developed llama chatbot extension for Webex to improve team interactions.
- **Reddit Genealogies:** Refactored and improved a NLP git repository to visualize the relationship between the subreddits for 3 popular web development coding languages: React, Angular, and Node.js. Defined new metrics.
- **Hackathon Winner:** Designed and developed Fitness Bubble – a social media and rewards-based app to motivate students to be physically active. Won best UI/UX award (out of 278 teams) at NotUniversity Hacks 2020.
- **Programmable Devices and Extensions:** As a research assistant in UChicago's AxLab, I designed and developed multiple augmented reality devices: Haptic Slider to play Atari, Programmable Lamp Switch, Trash Can Counter.
- **SAR Image Processing:** As a research assistant to Prof. Gelb of Dartmouth College, I optimized a change detection algorithm to improve its performance by 25% for low quality SAR images; implemented it in MATLAB.
- **Greenhouse Automation:** Spearheaded greenhouse devices development using Raspberry Pi, Python and AI/ML.

## SKILLS and INTERESTS

- **Languages/OS:** Python, Java, C/C++, SQL, Selenium, PowerShell, Bash, JavaScript, React, Linux, Windows
- **Frameworks/Tools:** Tensor Flow, PyTorch, FastAI, Matplotlib, Scikit, Power BI; Docker; Git; GitLab; CI/CD.
- **Interests:** Hackathons, Ultimate Frisbee (UChicago Fission Team), Club Tennis and Chess (state scholastic wins).