

# Sai Chaddha

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## EDUCATION

### **Stony Brook University**

*Master of Science in Computer Science*

- Concentration in Data Science and Engineering

*Bachelor of Science in Computer Science, Applied Mathematics & Statistics*

- Grades: 3.80 GPA, Dean's List, Magna Cum Laude Distinction

Stony Brook, NY

Aug. 2023 – May 2025

Aug. 2019 – May 2023

## EXPERIENCE

### **Software Development Teaching Assistant**

*Stony Brook University*

Jan. 2023 – May 2023

Stony Brook, NY

- Assisted the professor by being the Head Teaching Assistant for 115 students and proctoring 3 exams
- Helped students by holding office hours for a minimum 3 hours a week, maintaining a presence in every lecture, holding 1 review session prior to every exam, and answering 100+ questions posted in the class question forum
- Fueled class collaboration through creating 7 Process Oriented Guided Inquiry Learning based worksheets

### **Software Developer Research Assistant**

*Stony Brook University*

Aug. 2022 – Jan. 2023

Stony Brook, NY

- Displayed 200+ historical postcards written to loved ones from the 1870s to the 1940s on a singular platform through React and CSS
- Used Leaflet to design a map highlighting postcards from 25 countries with a legend of 8 colors for various empires
- Used Agile Software Development with Git version control and weekly meetings with fellow researchers

### **Software Engineer Intern**

*Data Device Corporation*

June 2021 – Jan. 2022

Bohemia, NY

- Created, managed, and released a 25+ page GUI software verification description through black box testing in preparation for deployment
- Achieved success in passing 50+ International Space Station chips through debugging legacy Visual Basic code
- Attained 98% confidence in a company robotic system by testing 800 company chips to train and debug the robot to perfectly place the chips in IC trays
- Sped up company CSV parsing through Regex pattern matching in Python

## PROJECTS

### **Distributed Banking System with Paxos Protocol** | *Java, Multithreading, Paxos, Git* Sept. 2024 – Oct. 2024

- Handled 500 transactions across 5 servers with fault-tolerance in a distributed banking application developed using a multithreaded Java environment
- Achieved 100% consensus accuracy utilizing the Paxos consensus protocol for transaction conflicts
- Decreased transaction latency by 50% using thread-safe multithreading

### **AgentBert: Chatbot with Toxicity Detection** | *Python, PyTorch, HuggingFace* March 2024 – May 2024

- Achieved 93% accuracy in filtering out toxic input in a conversational chatbot trained with GPT2 and toxicity detection
- Trained one model of the chatbot with GPT2 and HateBERT using a weighted average of input and output
- Trained another model of the chatbot with toxic data and used T5 to classify the concatenated input and output

### **A Digital Platform for Showcasing Historical Postcards** | *React.js, CSS, Git* Aug. 2022 – Jan. 2023

- Created an interactive online history exhibition displaying over 200 historical postcards on a fullstack platform using a MERN stack
- Presented the platform to over 90 people showcasing our world map feature developed using Leaflet
- URL: <https://empirehistorycards.cs.stonybrook.edu/>

## TECHNICAL SKILLS AND CERTIFICATIONS

**Languages:** Python, Java, C, JavaScript, HTML/CSS, Ruby, Go, Bash, C++

**Frameworks:** React.js, Node.js, d3.js, Express.js, Material-UI, MongoDB, SQL

**Developer Tools:** Git, Google Cloud Platform, VSCode, PyCharm, Google Colab, IntelliJ, Eclipse, Jupyter

**Libraries:** PyTorch, Pandas, Scikit-Learn, Matplotlib, Pytest, HuggingFace, Axios, Mongoose

**Certifications:** J.P. Morgan - Software Engineering Job Simulation