

ABHISHEK REVADEKAR

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EDUCATION

Stony Brook University

Master of Science in Computer Science | GPA: 3.7/4.0

Coursework: Natural Language Processing, Operating Systems, Databases, Computer Vision; Algorithms Group.

Stony Brook, New York

Aug 2022 - May 2024

University of Mumbai

Bachelor of Technology in Computer Engineering | GPA: 9.1/10.0

Coursework: Data Structures & Algorithms, Software Engineering Principles, Big Data Analytics, Distributed Systems.

Mumbai, India

Aug 2017 - May 2021

EXPERIENCE

Stony Brook University

Research Assistant - Operating Systems

- Designed an **AFL based TrustZone kernel fuzzer** for the secure world in ARM Trusted Execution Environment.
- Built custom Trusted Applications in C, for OPTEE and tested buffer overflow vulnerabilities using address sanitizers.
- Analyzed kernel image binaries using Angr.io and Ghidra, and studied the **kernel MMU configuration**.

Stony Brook, New York

May 2023 - Present

Stony Brook University

Research Assistant - Human Computer Interaction - [EyeCanDo](#)

- Improved EyeCanDo iOS app's **eye tracking calibration by 56%** with ARKit and OpenCV for homography.
- Performed **extensive task-based trials** in controlled environments with volunteer patients diagnosed with ALS.
- Trained BERT and T5 LLMs on distributed GPU clusters for **phrase-level gesture typing** using CUDA.

Stony Brook, New York

Jan 2023 - Dec 2023

BNP Paribas

Software Engineer

- Led critical updates for On-demand Cash Pooling - **enhanced interest consolidation strategy** for 8 enterprise clients valued at over ¥10M, by integrating lending/borrowing limits and automated reporting with secure email notification.
- Initiated effective risk mitigation to attain a **1-week incident resolution and patch delivery** in the Apache Log4j crisis.
- Adopted Agile workflow to develop **data handling APIs in Java**, as well as **migration & structure validation scripts** for 400+ tables in JGestab, supporting form integrity across BNPP's network.
- Created UNIX jobs for **file structuring and SHA-256 validation**, cutting human error and packaging time by 75%.

Mumbai, India

Jan 2021 - Jun 2022

PROJECTS

Raft-Based Distributed Fault-Tolerant Key/Value Storage System | *C++, Cmake, Python, Linux*.

- Implemented RPC-based **leader election, heartbeat and consistent logging features** of the Raft consensus algorithm, for robust communication and fault tolerance.
- Achieved a leader election time of **less than 500ms**, meeting the performance standard in a distributed network.

ScribbleNotes: Hand-writing transcription on iOS | *Swift, SwiftUI, CloudKit, CoreML*.

- Developed an iOS application using the VIPER architecture to **convert written notes to text form**.
- Integrated handwriting recognition model with CoreML, and **real-time iCloud synchronization** using CloudKit.

DataSurge: A Real-Time Data Pipeline | *Python, Flask, React, D3.js, Celery, Apache Kafka, MongoDB, Docker*.

- Engineered a **full stack web app** in Flask-React, with Kafka for **live stream processing**, and containerized deployment.
- Facilitated **distributed processing** for data transformations with Celery, and utilized **D3.js for visualizations**.

SKILLS

Languages:	Python, Java, C/C++, Swift, JavaScript, HTML/CSS, Bash.
Frameworks/Libraries:	Flask, Django, PyTest, Spring Boot, Maven, JUnit, Node.js, D3.js, React, Angular, Selenium.
Databases:	PostgreSQL, MySQL, MongoDB, Apache Kafka, Hadoop, PySpark.
Machine Learning:	PyTorch, Tensorflow, Keras, sklearn, Matplotlib, pandas, NumPy, OpenCV, CUDA.
Development Tools:	Git, Jira, VS Code, Xcode, Linux, Docker, AWS - S3, EC2, Lambda, API Gateway.

ACCOMPLISHMENTS

Publications: 5 research papers in Machine Learning · 55 citations · [Google Scholar](#).

Awards: "Best Paper Presentation" Award - ICCICT 2021 · "Best Paper" Award - ICSPC 2021.