# Abhishek Santosh Revadekar

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**Summary:** Passionate software developer with 1.5 years at BNP Paribas and pursuing a Master's degree in Computer Science at Stony Brook University. Proficient in algorithm development, software engineering, and data science, blending technical innovation with creative ingenuity and cutting-edge research. A proven project leader, committed to driving transformative change through technology.

## EDUCATION

**Stony Brook University**                                                                                   Stony Brook, New York

Master of Science in Computer Science | GPA: 3.6/4.0                                                      Aug. 2022 – May 2023

Coursework: Operating Systems, Natural Language Processing, Introduction to Computer Vision, Probability & Statistics.

**University of Mumbai**                                                                                               Mumbai, India

Bachelor of Technology in Computer Engineering | GPA: 9.1/10.0                                            Aug. 2017 – May 2021

Coursework: Data Structures and Algorithms, Database Systems, Networks, Distributed Systems, Software Engineering.

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, JavaScript, HTML, CSS, React, Angular, Node.js, REST, Android, Swift, Scala, Shell scripting.

**Frameworks & Libraries:** Java - Spring; iOS - ARKit, CoreML; Python - Django, PySpark, Flask, Selenium; C++ - STL, OpenCV.

**Databases & ETL Tools:** MySQL, PostgreSQL, Hadoop, Apache Kafka, Cassandra.

**Machine Learning:** PyTorch, Tensorflow, Keras, Sklearn, Matplotlib, Pandas, NumPy, OpenCV, NLTK, CUDA.

**Development Tools:** Agile, JIRA, Git, Xcode, VS Code, Linux, Anaconda, Docker, Kubernetes.

## WORK EXPERIENCE

**Stony Brook University**                                                                                    Stony Brook, New York

**Graduate Research Assistant - Operating Systems**                                                         May 2023 – Present

- Built a custom Trusted Application in C, for OPTEE-OS and tested memory overflow vulnerabilities using AddressSanitizer.
- Currently designing a TrustZone AddressSanitizer in C++ for the secure world in ARM Trusted Execution Environment (TEE).

**BNP Paribas**                                                                                                       Mumbai, India

**Software Engineer**                                                                                           Jun. 2021 – Jun. 2022

- Led critical updates for On-demand Cash Pooling, merging lending/borrowing limits using Java, Oracle SQL, Angular, UNIX. Boosted client satisfaction by 30% through adept leadership and teamwork.
- Synchronized cash pooling project communication, guided China team in 2022 roadmap planning to minimize misalignment.
- Automated client reports, halving manual work, and enhancing delivery speed by 35%.
- Delivered L3 support, averaging 1-hour resolution for data patches, averting production failures.

**Software Development Intern**                                                                             Jan. 2021 – Jun. 2021

- Developed Java-based data handling APIs and migration scripts for 400+ parameter tables in the JGestab application.
- Automated business rule evaluation with Selenium and Java, increasing testing efficiency by 30% and 10% reduction in errors.

## PROJECTS

**DataSurge: A Distributed, Real-Time Data Pipeline**                                                         May 2023 – Present

- Engineered a modular distributed real-time data pipeline, using Java-Spring Boot, Apache Kafka, Docker and Kubernetes.
- Integrated diverse data sources with flexible data model configuration with a stream rate of 400 events/sec and ~3 GB/day load.

**A Lightweight Hypervisor for Linux and VM latency measurement**                                           Feb. 2023 – May 2023

- Built Type 2 hypervisor in C and Assembly for Intel VT-x, enhancing virtualization.
- Attained efficient performance of 600 CPU cycle VM latency, by executing guest code in Assembly.
- Explored nested virtualization; noted 45% higher VM latency on VMware vs. direct host access.

**EyeCanDo - An iOS-based Eye Movement Tracking for HCI Assistance for ALS patients**                        Jan. 2023 – May 2023

- Enhanced app calibration accuracy by 15% introducing homography for gaze points using Swift, ARKit and OpenCV.
- Trained a distributed PyTorch model, on multiple GPU-enabled servers, for phrase-level gesture typing using a BERT-based encoder-decoder network and a 5M+ gesture simulation dataset.

## KEY ACCOMPLISHMENTS

**Publications:** 5 research papers in Machine Learning space (42 citations). Google Scholar: https://tinyurl.com/AbhiR-GScholar.

**Awards:** "Best Paper Presentation" award at ICCICT 2021 conference; "Best Paper" award - ICPSC 2021 conference.

**Research Mentor** for the AutoBuddy project in collaboration with Tata Institute of Social Sciences.