Affan Arif Khamse

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EDUCATION

New York University New York
Master of Science in Computer Science Expected May 2025
Courses: Operating System, Software Engineering, Data Science, Databases
University of Mumbai Mumbai India
Bachelor of Engineering in Computer Engineering (GPA: 9.00/10) June 2023

TECHNICAL SKILLS

Programming Languages: C#, C++, Java, Kotlin, Python, HTML, CSS, JavaScript , SQL
Frameworks and Libraries: Spring framework, ReactJS, Django
Testing Frameworks: Junit, PyTest, Django.test
Database Management Technologies: MySQL, PostgreSQL, Hibernate ORM, Firebase
Cloud Computing and DevOps: AWS, CI/CD, Travis CI, Docker, Azure
Other Technologies: Android Development, Agile Development, Git, Bootstrap

ACADEMIC PROJECTS EXPERIENCE

VibeCheck | GitHub **Fall 2023**
Django, Bootstrap, AWS, Supabase PostgreSQL, Redis Channels, TravisCI/CD, WebSocket, Spotify API, Hugging Face

- Spearheaded the development of "VibeCheck," an innovative music-based social networking application, harnessing the **Spotify API** to create a dashboard for user reflecting listening habits, and overall musical vibe based on last 1 day listening history
- Enhanced user interaction in our music community by leading the **Redis Channels and WebSocket** integration for a chatroom feature Achieved a 50% increase in speed over traditional HTTP, promoting real-time communication among users with shared musical interests
- Addressed critical challenges during deployment, notably by hosting large models(7-8GB) on **Hugging Face** and utilizing API calls for its access.
- Oversaw the deployment of VibeCheck on AWS, focusing on **Travis CI** for automated testing and deployment. Ensured seamless integration and deployment workflows, utilizing **AWS Elastic Beanstalk and Redis (ElastiCache)** for enhanced performance and reliability
- Enhanced the project's reliability by implementing comprehensive unit testing with **Django.test**, achieving an impressive **87% coverage**. This effort significantly improving the application's quality and maintainability.

Document Authenticator **Spring 2023**
Django, Python, MySQL, Azure

- Enhanced a document (score reports and bank statement) authentication system by integrating an **Azure OCR model** with machine learning, achieving over 80% accuracy in text extraction from documents. This accuracy level was pivotal for identifying document authenticity, especially in **detecting tampering**
- Utilized string pattern-matching (**regular expression**) algorithms to efficiently filter and categorize information according to document type, streamlining the data processing workflow
- Conducted thorough validation of extracted text against organization's (Educational and financial) database records to ensure a match, significantly enhancing the accuracy of extracted data entry by confirming the integrity of information
- Streamlined a document verification system to swiftly authenticate and detect alterations in documents by leveraging **database integration**, ensuring quick and accurate identification of document originality

Store Inventory Management System **Winter 2022**
Spring MVC, Java, MySQL

- Developed and implemented a **Java Spring Web Application** for store inventory management, integrating a MySQL database for robust data handling. This unified system improved operational efficiency and inventory tracking, ensuring scalability
- Proficiently performed **CRUD** operations on store inventory through software implementation
- Integrated **Itext maven library** to generate customized PDF invoices, streamlining the billing process

RELEVANT EXPERIENCE

Graduate Teaching Assistant **Jan 2024 – Present**
 New York University, New York, USA

- Course Tutor, Object-Oriented Programming
  o Tutor undergraduate students enrolled in Object Oriented Programming course
  o Cover a wide range of topics including C++, Java, JVM, UML diagrams, and Object-Oriented Programming principles
- Course Grader, Programming Tools for the Data Scientist
  o Assisted in grading assignments on Python, Regular expressions, NumPy, SciPy, Pandas, and Data visualization

Student Developer **Aug 2021 – July 2022**
 Google Developer Student Club BVCOE, Navi Mumbai, India

- Developed and launched website for Google Developer Club with a team of 5 members using React.js framework
- Led the organization of key events in cloud computing, web, and Android development, resulted in a standout virtual workshop with over 300 attendees, showcasing interactive tech learning in web and Android development

Course Assistant, Fundamentals of Programming Lab **Aug 2021 – Dec 2021**
 BVCOE, Navi Mumbai, India

- Mentored over 100 students in Java & C++ labs classes, significantly enhancing course success rates by providing personalized guidance
- Troubleshoot computer hardware, software, and programming-related problems, resolving over 100 issues