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Education

Northeastern University *Boston, MA*
Master of Science in Computer Science *Sept 2022 - May 2024 (Expected)*
Courses: Program Design Paradigms, Database Management Systems

K.J. Somaiya College of Engineering *Mumbai, India*
Bachelor of Technology in Computer Engineering (GPA: 8.56/10) *Aug 2015 - May 2019*
Courses: Data Structures and Algorithms, Operating Systems, Compilers, Computer Networks

Skills

Languages: C, Java, C++, Python
Libraries: Spring Boot, JPA, Hibernate, JUnit, Win32 APIs, Linux System APIs, OpenCV, OpenGL, NumPy
Tools: AWS, Apache Kafka, Git, MSVC, MongoDB, MySQL, Docker, OpenShift, Jenkins, Mulesoft Anypoint

Work Experience

Barclays *Pune, India*
Application Developer *Jul 2019 - Jul 2022*

- **Barclays Mobile Banking APIs**
  - Designed and developed an ecosystem of APIs for setting up repayment plans for delinquent accounts.
  - Gained 5x improvement in API response times by making downstream API calls asynchronous and parallel.
  - Developed performance logging and monitoring library to track performance of these APIs.
  - *Tools used*: Java, Spring Boot, MySQL, Mulesoft Anypoint, Openshift
- **Customer Outcome Testing Application**
  - Gathered requirements from bank agents to understand how they manually reviewed collection cases.
  - Developed a backend API and database components to digitize the manual case review process.
  - Closely worked with bank agents to develop the UI and iterate over the application flow.
  - **Key Achievements**: Reduced manual effort for case reviews by 232 hours/week (5.8 FTEs).
  - *Tools used*: Java, Spring Boot, MySQL, HTML, CSS, JavaScript, Appzillon
- **AWS Microservices and Cloud Infrastructure Automation**
  - Developed microservices to create collection cases for delinquent accounts received via Apache Kafka events.
  - Developed CloudFormation templates to deploy auto-scaling ECS clusters, MSK clusters, RDS, and EC2 machines on the AWS cloud platform.
  - Developed AWS Lambdas for rotating credentials and replicating EBS volumes to backup data.
  - Developed features for APIs to automatically fetch the latest credentials from AWS Secret Manager.
  - **Key Achievements**: Single-click infra provisioning; Reduced server costs by demand-based cluster scaling.
  - *Tools used*: AWS, Apache Kafka, Python, Jenkins

Projects

C Debugger

- Developed a debugger with features like breakpoints, commands to step in and out of instructions.
- Other features include commands to display and overwrite values of debuggee memory space and register sets.
- *Tools used*: C/C++, ptrace, GCC, GDB

Cross-Platform Multimedia Library

- Developed a library that allows developers to write cross platform code for graphics, sound, I/O and window management across Windows and Linux.
- *Tools used*: C/C++, Python, GLSL, Kernel32, User32, GDI, X11, XKBLib, WASAPI, ALSA, RenderDoc, GDB

Simulation for Development of Autonomous Agents

- Developed a simulator in which vehicles can learn how to drive autonomously.
- Implemented pedestrian and vehicular traffic systems to create an urban environment.
- Implemented I/O channels to transfer data between the simulator and the autonomous driving model.
- *Tools used*: C#, Python, OpenCV, Tensorflow, Pytorch, Pandas, Unity