Ning Cao

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Malden, MA, 02148 | Master of Northeastern University

Education

Northeastern University / Boston, MA   Sep 2021 – May 2023
MS of Electrical & Computer Engineering, GPA: 3.8
Concentration: Computer Vision, Machine Learning, and Algorithms
Xidian University / Xian, Shaanxi   Sep 2016 – May 2020
BS of Computer Science and Technology, GPA: 3.7

Technical Skills

Languages and Techniques: JAVA, JavaScript/TypeScript, HTML, CSS, Python, C, SQL, Swift, C#, Git
Frameworks and Tools: Spring Boot, Spring Cloud, Angular, Hibernate, JUnit, SQL Server, MySQL, Postgres, Django, Flask, PyTorch, DynamoDB, CI/CD (Jenkins and GitHub Actions), AWS, Azure, docker, Kubernetes

Experience

Kroger   Oct 2023 – Present
Java Developer
- Reduced build times by 20 minutes and improved database efficiency by 25% by employing Mockito for testing and optimizing SQL queries.
- Developed the NOF API, including logic for the delete endpoint, validation, and creating a mocked endpoint with Spring Boot 3.2.4, Java 21, and MongoDB, achieving **5ms response times**.
- Automated deployment by setting up **Helm charts** in Kubernetes, improving configuration and management.
- Migrated product domain data APIs to **3800 store edge clusters**, designing the architecture for loader applications from Kafka to edge databases, ensuring data consistency and availability.

Projects

Hospital Data Monitoring Web Application
- Leveraged the robust capabilities of Spring Boot to engineer a specialized web application for remote monitoring of critical hospital data, aimed at supporting healthcare professionals in their work
- Employed **Spring Cloud** to architect a modular, scalable microservices infrastructure that includes essential services such as secure user management, authentication, and sophisticated real-time analytics of hospital data
- Created a user-friendly front-end interface using Angular, HTML5, and **JavaScript**, accessible on any device
- Deployed backend services on Amazon EKS, with data storage in Amazon RDS and media files in **Amazon S3**
- Implemented real-time system logging and performance monitoring using Amazon CloudWatch and Log4j

On-the-Go Pedestrian Recognition iOS App
- Created an iOS app with **Swift** for pedestrian recognition, aiding researchers in refining computer vision models
- Integrated camera and photo library, enabling users to capture or select images for pedestrian recognition
- Established backend functionality for user authentication, image uploading, and dataset storage with **Django**
- Improved the pretrained Fast R-CNN model using accumulated user data, achieving efficient 2-second predictions

Sync Player - Android App
- Developed an Android app using java for synchronized video playback, enabling friends to watch videos together
- Built an instant messaging module for communication, enabling synced video groups creation via chat commands
- Enabled synchronized play and pause within groups by sending user actions with messaging modules

Meningitis Intelligent Assistant Diagnosis
- Developed a medical analysis tool and Android app for meningitis diagnosis, assisting doctors for timely treatment
- Preprocessed medical data, applied PCA for dimensionality reduction, and trained and tested Random Forest, Support Vector Machine, and Neural Network models, achieving 85% accuracy in meningitis type recognition
- Designed the UI for the Android app, enabling input of symptoms and patient details to expedite the diagnostic
- Developed a **Flask**-based backend for diagnostics using Random Forest, achieving real-time predictions

Certification

AWS Certified Solutions Architect – Associate (SAA-C03)