HARIPRAKASH VELMURUGAN

linkedin.com/in/hariprakashv | hvelmuru@asu.edu | 6028602993| Tempe,AZ

Highly Motivated Software Engineer with experience in backend development, Python frameworks and library. Proven skills in backend optimization, API implementation along with demonstrated expertise in project management and operational excellence.

EDUCATION

Master in Computer Science, Arizona State University | 3.93/4.00   **December 2024**

PROFESSIONAL EXPERIENCE

Senior Software Engineer   **January 2018 - December 2022**
PriceWaterhouseCooper   **India**
- Directed backend optimization initiatives, shifting data-intensive operations to the database layer, achieving a 40% reduction in client-side rendering of SQL query processing time and enhancing system reliability.
- Created REST APIs to optimize and transition from monolithic to microservices architecture using API design patterns.
- Implemented security principles such as OAuth2.0 , SSL protocols and HTTPS protocol to enhance application security.
- Enhanced standard Java classes to support customer-specific customizations, improving code maintainability and flexibility.
- Modularized over 10,000 lines of code to build reusable components, reducing development time by 30%.
- Determined strategic refactoring, bug fixing, and upgrades, reducing codebase size by 20% and eliminating redundancies.
- Developed a Planning and Production Lifecycle Analytics Application using MVC principles, improving software design and functionality, reducing manual efforts by 45% and cutting expenses by 30%, winning the SAP ACE award.
- Architected Travel Management Application using JavaScript frameworks and libraries, reducing operational costs by 38%.
- Coordinated a collaborative cross- functional offshore team to enhance sales and distribution for a dairy firm in Costa Rica, creating 12+ dashboards for various business processes,frontend using UI5 libraries.
- Used expertise in Continuous Integration to create automated testing frameworks for code coverage and reduced bugs.
- Utilized a strategic approach to enhance application performance through expert implementation and optimization of JUnit test cases and test suites, leveraging test-driven development (TDD) methodologies.
- Utilized Version Control Systems to maintain code integrity and manage development workflow.
- Fostered a friendly, collaborative environment within team, facilitating open communication and effective problem-solving.

Software Developer Intern   **January 2018 - June 2018**
Invento Robotics   **India**
- Deployed an Android app on the Play Store, serving as a remote control for the Mitra robot, helping customers navigate robots with ease and improving usability by 38%.
- Applied strong object-oriented programming skills, data structures to develop efficient and resilient code in Java by converting vision computing classes into reusable packages, enabling their use as a library for future projects.
- Prototyped machine learning models to recognize human faces and implement NLP models with 93% accuracy.
- Leveraged AWS S3 bucket to store images and analyze Python algorithms on EC2 instance vs. Nvidia Jetson GPU hardware.
- Resolved production-level bugs with quick turnaround times and participated in weekly code reviews.

TECHNICAL SKILLS

Programming languages: Python , Java , C++.
Web Development: Django , HTML , CSS , Bootstrap , JavaScript , Typescript , ReactJs , Node.js , Stream-lit .
Database: MySQL , NoSQL , PostgreSQL , MongoDB .
Frameworks/Tools: Github Actions , CI/CD, Postman, Jira, Microservices, Docker, AWS, Kubernetes , Heroku, Linux, UML.

PROJECTS

Real-Time Notification System Transforming Static Web APIs   **June 2024**
- Developing a real-time notification system by transforming static web APIs using Python, Kafka, ksqlDB, and Telegram.

Vision Model REST API with MLOps Integration   **April 2024**
- Developed a PyTorch computer vision model REST API using Flask. Implemented MLOps practices for deployment to Heroku. Built and tested the API locally, verified functionality through endpoint testing.

CIFAR-10 Image Classificaiton   **April 2024**
- Utilized TensorFlow,Keras for model implementation, normalizing the data, data modeling, defining the CNN architecture, training on CIFAR-10 dataset having 50,000 images, and evaluating on 10,000 test images.

MNIST Image Classificaiton   **April 2024**
- Developed a Convolutional Neural Network (CNN) and a linear neural network to classify images from the MNIST and Fashion MNIST datasets. Each dataset contains 70,000 28x28 grayscale images of digits and clothing.

Streaming Data Pipeline for Real-Time Analytics   **January 2024**
- Worked on ETL Data transformation, Data flow, orchestrating workflows, and streaming pipelines. Used IMDB Data set for processing. Tools: PostgreSQL, Spark , Hadoop , Docker Compose, DBT, Airflow, Airbyte.

Flex Net Content Delivery Network   **November 2023**
- Built A content delivery network performing caching for improved performance, security measures, and monitoring. Used Kubernetes and deployed MongoDB docker images for spinning up servers.Tools : Minikube,docker.

CERTIFICATIONS
- Postman API Fundamentals Student Expert - Link | Ongoing : Meta Back-End Developer Professional Certificate - Link