

HariPrakash VelMurugan

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SUMMARY

Software Engineer with experience in backend development, microservices, and full-stack engineering. Led impactful projects at PwC, optimizing data-intensive operations, modernizing legacy applications, and reducing processing times through efficient code restructuring and microservices transitions. Open to both New Grad and mid-level roles in backend development, full-stack engineering, and infrastructure.

EDUCATION

Master of Science in Computer Science **December 2024**
Arizona State University CGPA 3.93/4.0
Coursework: Data Mining, Distributed Database Systems, Machine Learning, Algorithms, Data Structures, Cloud Computing.

B.Tech. Computer Science and Engineering **May 2018**
Vellore Institute of Technology
Coursework: Computer Architecture, Database Systems, Theory of Computation, Operating Systems, Applied Linear Algebra.

TECHNICAL SKILLS

Programming : Python, JavaScript, C, C++, Bash, SAP ABAP, SAP Fiori, HTML, CSS, Bootstrap, Typescript.
Database: SQL, MySQL, PostgreSQL, NoSQL, MongoDB, Elasticsearch, SAP HANA DB, DynamoDB.
Frameworks & Others: Flask, React, Node.js, Redis, GitHub Actions, Linux.
Technologies: Git, Docker, Kubernetes, AWS(S3, RDS, IAM, SES), Kafka, Android, Prometheus, Grafana, Postman.
Certifications: Postman API Fundamentals Student Expert | Meta Back-End Developer Professional Certificate.

PROFESSIONAL EXPERIENCE

Price Waterhouse Coopers **India**
Senior Software Engineer **April 2022 - December 2022**

- Directed backend optimization initiatives, shifting **data-intensive** operations to database layer, which achieved a **40% reduction in SQL query processing time** and boosting system reliability.
- Implemented **REST APIs** to transition to microservice architecture, reduced system-wide failures by isolating faults to individual services.
- Revamped legacy application through strategic **refactoring, bug fixing, and upgrades**, significantly bolstering maintainability.
- Managed team of 2, trained and guided on **agile, version control**, increasing code quality and maintainable codebases.

Price Waterhouse Coopers **India**
Software Engineer **September 2018 - March 2022**

- Developed Planning and Production Lifecycle Application deploying **MVC design pattern**, cutting **manual processing time by 80%**, **errors by 90%**, accomplished **adoption** by 50 teams, streamlining operations.
- Architected 12+ custom dashboards leveraging **Javascript** libraries, driving **data-driven decisions** and **boosting revenue by ~15%**.
- Designed Travel Management Application to automate approval process, cut down **approval time by 20%**, **errors by 33%** and boosted user satisfaction with revised efficiency and usability.
- Upgraded data entry process by integrating barcode solution using **javascript libraries**, **improved accuracy by 25%**, and reduced errors.
- Modularized over **10,000+ lines of code** to build reusable components, **reducing development time by 30%**.

Invento Robotics **India**
Software Engineer Intern **January 2018 - July 2018**

- Created image recognition API leveraging **Python** and integrated into **Flask** web app, improving scalability and reducing response time.
- Worked with product managers to define and deliver new **Android Application**, resulting in a 40% increase in user engagement.
- Led efforts in troubleshooting, testing, and optimizing software, minimizing deployment errors through **CI/CD pipelines and Docker**.
- Executed an image recognition feature by storing images in **AWS S3**, utilizing **EC2** for processing and **RDS** for database management.

PROJECTS

Non-Profit STEAM Superheroes Opportunity Hack 2024

- Utilized **Flask, Python, AWS Lambda, S3, DynamoDB, IAM, and SES** to run features such as mentor mentee matching, scheduling, secure admin access with OTP-based authentication, and email notifications for non-profit which helps underprivileged students.

Real-Time Notification System

- Designed and developed a real-time notification system, converting static APIs into dynamic, event-driven services on **Kafka**. Attained reduction in latency and restructured system's responsiveness for high-volume traffic. **Tools: Python, Confluent Kafka, sqlalchemy**.

NetFlex Content Delivery Network

- Built a high-performance CDN with advanced **caching and sharding strategies**. Leveraged Docker Compose to orchestrate MongoDB server images, ensuring resilient and scalable deployment. **Tools: PostgreSQL, Docker, Compose**.

Computer Vision API with PyTorch and MLOps

- Deployed **Flask app** with a vision model powered by **TensorFlow**, incorporating **MLOps** best practices for streamlined deployment.

AWARDS

- Placed Second at Opportunity Hack 2024 conducted by Meta | Second Place in Code-A-thon conducted by Hacker Devil @ ASU.
- Awarded **"Team Spot Award"**, **"Spot Award"** for exceptional contributions at PwC.