Hemanth Pedamallu

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EDUCATION

Master of Science in Computer Science **January 2022 – December 2024**
University of Florida - Gainesville, Florida *GPA: 3.77/4.00*
Coursework: Analysis of Algorithms, Advanced Data Structures, Database Management System, Computer Networks, Software Engineering, Distributed Operating System Principles, Agile Project Management.

Bachelor of Technology in Computer Science Engineering **August 2018 - May 2022**
Bennett University - Delhi, India *GPA: 3.66/4.00*

SKILLS

Languages **:** Java, Python, SQL, C#, JavaScript, Dart, HTML, CSS, Typescript.
Technologies **:** React.js, Flask, Next.js, Docker.
Frameworks/Tools **:** MySQL, AWS, Git, .Net, REST API, Spring Boot, PostgreSQL, Flutter, MongoDB.

PROFESSIONAL EXPERIENCE

University of Florida - *Graduate Student Assistant – Full Stack Developer (Team page)* **January 2023 - Present**
Technologies: PostgreSQL, React, Spring Boot, Portainer, Nginx and OAuth

- Pioneered the development of an **end-to-end** web application designed to manage and analyze precise gene-specific data across extensive blueberry fields **throughout Florida**, achieving a remarkable 10mm precision in plant tracking.
- Engineered and hosted a resilient PostgreSQL database on the cloud, adeptly designing a complex relational schema to integrate plant's genetic, fruit, and location information.
- Developed a **Flutter** application with offline data collection from the fields and implemented **auto synchronization** between the Fire store and central Postgres database.
- Deployed and orchestrated the application on a robust **on-premises** Linux server, implemented Dockerization to optimize resource utilization and seamlessly hosted the application.

Capgemini - *Senior Software Engineer – Full Stack Developer* **February 2022 - December 2022**
Technologies: MySQL, Spring, React, AWS, Docker and Kubernetes

- Created and enhanced web pages in React for the company's employee management web application which caters for over 100,000 users.
- Developed 10 plus features in Spring boot micro-service architecture backed by MySQL database queries.
- Ensured robustness and quality through rigorous testing with over 50 JUnit and Mockito test cases, while continuously analyzing and enhancing code quality with SonarQube.
- Deployed application using Docker and Kubernetes services on AWS cloud to ensure 0 downtime and fault tolerant with multiple cluster nodes.

Mirra Health Care – *Trainee Software Engineer – Backend Developer* **August 2021 - February 2022**
Technologies: ASP.NET, Microsoft SQL server

- Developed a prototype of health insurance claim application, a clone of company product in ASP. NET MVC architecture with Microsoft SQL server.
- Implemented and updated actual company application modules, by optimizing the database queries thus resulting in at least 4x faster data retrieval.

PROJECTS

Disease and Wax Estimation | *For internal use at Blueberry Lab*
Technologies: Flutter, Python

- Developed a **Flutter** application for real-time detection of disease area on leaves and wax on blueberry to help collect data for genomic research purpose.
- Utilized **PlantCV** in Python for image processing to analyze shape, color, bloom and disease of blueberries.

VOIP Spam Call Detection | https://ieeexplore.ieee.org/document/9788233
Technologies: Python, Wireshark

- Pioneered application to detect the spam calls from the SIP responses (600,000 responses) which are extracted from pcap files by using Wireshark.
- Proposed Random Forest Classifier with 95.8% accuracy and implemented High Performance Computing (HPC) techniques such as parallel processing for optimized performance.

PlantNursery | *GitHub*
Technologies: Spring boot, AWS EC2

- Developed a Spring Boot microservices architecture, improving server response time by 30%.
- Established a JWT-based authentication system to guarantee secure user authentication and maintain data integrity.
- Implemented RESTful APIs, seamlessly integrating with a MySQL database, and deployed microservices on AWS EC2 instances for scalable hosting infrastructure.