Prateek Mohan

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PROFILE

As a proactive and adept graduate student in Computer Science, I've specialized in Cloud Computing, Data Science, and Machine Learning, gaining substantial professional exposure as a Software Engineer II at VMware Inc. Now pursuing my Master's degree at Arizona State University, I am eager to contribute my skills and insights to an innovative organization that cherishes ingenuity and collaborative teamwork.

EDUCATION

1. **Master of Computer Science** — Arizona State University Aug 2022 - May 2024
2. **Bachelor of Technology, Computer Science and Engineering** — PES University, Bangalore, KA, India Jul 2015 - Aug 2019

WORK EXPERIENCE

1. **Software Engineer II** — VMware Inc., India Jul 2019 - Jul 2022
   - Automated First-Class Disk (FCD) System: Developed and deployed a Kubernetes-based system using Docker and vSphere with Tanzu architecture, reducing deployment time by 90%. This enhanced developer productivity and streamlined the release process.
   - Advanced Logging Methodology: Designed and implemented a centralized logging system that decreased manual debugging effort by 50% during extensive multi-cluster testing. This improved software quality and accelerated troubleshooting.
   - Workloads and Clusters: Supported the deployment and management of Workload Control Plane (WCP), NSX, and Tkg Clusters, simplifying cluster complexities and ensuring efficient resource utilization.
   - Cross-functional Collaboration: Successfully collaborated with various teams (product, security, QA) to deploy the Multi-cluster Database system, fostering effective communication and alignment across departments.
2. **Software Engineering Intern** — VMware Inc., India Jan 2019 - Jul 2019
   - Datacenter Layout Verification: Developed a Java application using the vSphere platform to automate datacenter layout verification, improving accuracy by 75% and saving engineers 20 hours per week.
   - Data Parsing and Analysis: Implemented a novel method for parsing test case data, identifying irregularities with 92% accuracy and enhancing data quality for improved test results.
   - Datacenter Lifecycle Analysis: Conducted a comprehensive analysis of datacenter lifecycle from a storage perspective, leading to optimized resource allocation and 15% cost reduction.
3. **Research Intern** — University of California, Irvine, CA Jul 2018 - Aug 2018
   - Real-time Environmental Health Monitoring: Integrated diverse environment data streams into a comprehensive health metric dashboard, enabling real-time monitoring and informed decision-making.
   - Data Collection Optimization: Deployed a state-of-the-art API to optimize data collection processes, improving data accuracy and consistency by 80%.
   - Novel Cigarette Intake Metric: Developed a novel cigarette intake equivalent metric by analyzing air pollution data and individual breathing rates, contributing to improved public health research.

RELEVANT PROJECTS

- **Fetal Monitoring System - Cloud Computing and Big Data (PES University)**: Designed and built a low-cost fetal monitoring system leveraging cloud-based solutions. Achieved a remarkable 98% cost reduction compared to traditional ultrasound and 96% accuracy in isolating fetal heartbeats. Secured patent approval from the Indian Patent Office, recognizing the project's inventiveness and technical expertise.
- **Indoor Positioning System (PES University)**: Developed advanced algorithms for Android phones that transformed raw sensor data into precise location data with 92% accuracy. This enabled a hospital-based indoor positioning system for enhanced patient care and operational efficiency, demonstrating my ability to solve real-world problems with innovative technology.
- **Depth Sensing Mono Camera (Huawei Club, PES University)**: Formulated a novel depth-sensing mono-camera program incorporating Capsule neural networks for accurate depth estimation. Employed computer vision techniques to extract precise depth information from monocular images, showcasing my proficiency in advanced machine learning and computer vision skills.

SKILLS

- **Cloud Computing:** AWS, GCP, Azure, Kubernetes, Docker, Service Mesh, Serverless Architecture, Microservices, DevOps, Architecture
- **Data Science:** Python, SQL, Pandas, NumPy, SciPy, Scikit-learn, TensorFlow, PyTorch, Keras, Hadoop, Data Visualization, Data Analytics, Machine Learning, Deep Learning, NLP, CV, Statistics, Signal Processing, Neural Networks, Model Optimization, Data Visualization
- **Software Development:** Java, Python, JavaScript (Flask), RESTful APIs, CI/CD, Agile Development, Design Patterns, Design, Linux/Unix, Code Reviews, Prototyping from Ideas and Wireframes
- **Virtualization:** VMware, Hyper-V, KVM, Xen, VirtualBox
- **Database Technologies:** SQL, MySQL, PostgreSQL
- **Integration and Engineering:** Implemented innovative solutions and engineered systems for optimal integration
- **Additional Skills:** Agile Methodologies, Git, API Development, Unit Testing, Version Control, Web Development, C++, C, Object-Oriented Programming (OOP), Debugging, Security, Software Architecture, Software Testing, Scrum, Communication, Problem-Solving, Critical Thinking, Adaptability, Time Management, Leadership