Manish Shambu
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Education

- **University of Colorado at Boulder** — Boulder, CO
  Master of Science in Computer Science; GPA: 3.79/4.0 — *Aug. 2017 – (expected) May. 2019*
  - Coursework: Data Center Scale Computing, Advanced Algorithms, Distributed Systems, High Performance Scientific Computing, Natural Language Processing, Internet of Things, Algorithmic Human Robot Interaction

- **PES University** — Bengaluru, India
  Bachelor of Engineering in Computer Science; GPA: 8.44/10.0 — *Aug. 2011 – July. 2015*
  - Coursework: Analysis and Design of Algorithms, Computer Networks, Operating Systems, Data Structures, Unix System Programming, Database systems.

Skill set

- **Languages and Libraries**: Python, C, Java, SQL, Java Script, scikit-learn, numpy, OpenMP, MPI, OpenCL
- **Other Tools and Frameworks**: Hadoop, Spark, Apache Kafka, AWS, Git, Unix, Raspberry Pi, Docker, Kubernetes, Serverless Computing, Cassandra, Flask, Jenkins

Current research

- **Drone Assisted car parking** : Simplifying car parking using drones. A drone captures a snapshot of the parking space, identifies empty spaces and guides a car to the empty parking spot.

Previous directed research

- **Non Verbal expression for Robots (Advisor - Prof. Brad Hayes)** : Built a system to generate body language for robots
- **Byzantine Chain Replication (Advisor - Prof. Shivakant Mishra)**: Architectured and built a Byzantine Fault Tolerant system with 2f + 1 replicas.

Professional Experience

- **Visa Inc** — United States
  Software Developer Intern — *May 2018 - August 2018*
  - **Next-gen Tech Products**: Spearheaded and developed an intelligent task assigning system(iTAS) using Drools rule engine in Java. Enhanced a gamification portal that is used to drive efficiency in Visa's Data Center.

- **Oracle** — Bengaluru, India
  Software Developer — *Jun 2015 - Jul 2017*
  - **Diameter Signaling Router**: Developed DSR's Network Function and Orchestration feature using OpenStack. Fully integrated the feature with CI pipeline. Scaled down the DSR's deploy time from 1 week(manual) to an hour(automated).

Selected Project Work

- **Big Data - Shopping cart**: Product review analysis using Spark and MongoDB on Amazon Shopping cart dataset.
- **Intelligent Home Security**: Built a smart and intelligent home security system. Extensive usage of Raspberry PI to collect sensor data. Real time video monitoring and anomaly detection.
- **Parallel FFT** : Parallelized the FFT algorithm using OpenMP and MPI. Achieved multi fold improvements in speed.
- **SpeeDroid**: A crowd sourced android application to detect potholes and plot it on Google Maps.
- **HopIN**: Developed a carpooling software for the students at PES University. Designed and developed the driver rating and crediting system along with on the fly demand matching.

Awards & Honors

- Best Innovative Idea award at Student Nokia Developer lab.
- Distinction award during all the semesters at PES University.
- Employee of the year award for delivering the code with quality on time.

Leadership and Others

- Student representative for CS department at PES Placement Cell.
- Graduate Teaching Assistant for Data Structures course. - Prepare materials, exercises and conduct recitation for nearly 100 students. Create quizzes. Make sure that students understand the concepts clearly and help them debug problems during office hours.