Tapesh Joham

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Education

- **Indian Institute of Technology Mandi** H.P., India
  B.Tech. in Computer Science and Engineering; CGPA: 8/10 *2014 - 2018*

Work Experience

- **Software Engineering Intern, Khosla Labs** *Dec 2016 - Feb 2017*
  Wrote python scripts which scrape data from various social networking sites like Facebook, Google, etc. using their APIs. Wrote several micro-services in python to perform various tasks. Wrote Spark Jobs which run on Cassandra database in MapReduce fashion for computing feature vectors, which are then fed to the Machine Learning Pipeline. [Spark, Cassandra, Python, ML]

Selected Projects

- **Computation of bounds for an undirected network (Ongoing)**: Trying to prove/ disprove the conjecture on network coding for an undirected network. Focuses on design, implementation, and analysis of algorithms to compute outer as well as inner bounds on undirected network graph. Required background in algorithm design, graph theory, and multi-commodity flow problem. [C++]
- **Analyzing Amazons Warehouse using AWS Elastic MapReduce**: Analyzed Amazons item database containing billions of records with incoming real-time updates, to show top products based on some predefined criteria. Used AWS Kinesis for streaming data, HBase for storage and HiveQL for computation on the AWS Elastic MapReduce cluster.
- **Hosting heterogenous containerized Servers/App platforms on a physical server**: Docker container-based cluster to host heterogeneous servers with performance load balancing via NGINX. Used Docker-compose to link docker containers implementing front-end and back-end platforms. Implemented Nginx for balancing the request load to increase the availability of sporadic requests.
- **3D Holographic Projector**: Projects a 3D Model in the pyramid-shaped structure which can be controlled by moving the tracer. Used Unity3D to create the application, which then projected on to the pyramid. Used OpenCV and *C#* Scripts to detect and control the 3D Model. Also integrated Leap Motion Sensor to control the 3D Model. [Unity3D, *C#*(Basic), Leap API]

Technical Skills

Strongest Areas	Algorithms and Data Structures
Languages	C, C++, Python, PHP, Shell Script, JS
Tools/Frameworks	JQuery, STL, LaTeX, MySQL, Git

Relevant Courses

Data Structures and Algorithms	Databases	Data Mining
Deep Learning	Pattern Recognition	Artificial Intelligence
Computer Networks	Operating Systems	Computer Organisation

Achievements and Awards

- Qualified for ACM ICPC 2016 India Finals (Among Top 100 Teams from India)
- Ranked 4^{th} at Amazon Code Wizard Challenge 2017 (out of 189 teams from all IITs)
- Ranked 42^{th} at ACM ICPC 2017 Online Preliminary Round (out of 3250+ teams)
- Ranked 18^{th} at ACM ICPC 2016 Kolkata Regionals
- Ranked 95^{th}(Global) & 45^{th}(India) in CodeChef Long Challenge(Sept 16) among 8,500 Candidates
- Ranked 3^{rd} in IIT Mandi's Design Practicum
- Ranked 3^{rd} in Coding War, IIT Mandi Coding Competition

Hobbies

Competitive Programming, Travelling, Reading, Solving Puzzles, Playing Games.