Tapesh Joham

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Education

- **Indian Institute of Technology Mandi** — H.P., India
  B.Tech in Computer Science and Engineering; CGPA: 8.1/10 — 2014 - 2018

Work Experience

- **Internet Business Japan** — Bangalore, India
  Software Developer — July 2018 - Present
  - Creating immersive VR, AR and XR Apps using Unreal Engine 4 and Unity with the integration of the industry's latest technologies like AI. Worked on devices like Oculus Rift, Oculus Go, and Magic Leap One.
  - Worked on training the end to end convolutional neural network (CNN) with multiple losses to account the various variations in a dataset.
  - Design and Development of web based application which uses Go server for handling requests as well as for database access.
- **Amazon India** — Hyderabad, India
  Project Intern — April 2017
  - 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
- **Khosla Labs** — Bangalore, India
  Software Engineering Intern — Dec 2016 - Feb 2017
  - Worked on data scraping and fetch user data from different social networking sites like Facebook, Google, Twitter, etc. using different python libraries.
  - Wrote micro-services and spark jobs for computing different feature vectors, which then fed to the Machine Learning Pipeline. [Spark, Cassandra, Python, ML]

Selected Projects

- **Computation of bounds for an undirected network**:
  - Trying to prove/ disprove the conjecture based on network coding.
  - Researched in the field of algorithm design, graph theory, and multi-commodity flow problem.
  - Focuses on design, implementation, and analysis of algorithms to compute outer as well as inner bounds on undirected network graph. [C++]
- **Unsupervised Deep Hashing for biometric modalities**:
  - Worked on generating binary hash-code from a given image using an unsupervised deep learning model.
  - Trained a siamese like network with multiple losses to account the variations in the FVC dataset.
- **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.
  - Also integrated Leap Motion Sensor to control the 3D Model.

Technical Skills

Strongest Areas	Data Structures and Algorithms, Deep Learning, AI
Languages	C, C++, Python, Golang, HTML, CSS, JS
Tools/Frameworks	Unity, UE4, STL, LaTeX, MySQL, Git

Achievements and Awards

- Qualified for ACM ICPC 2016 India Finals (Among Top 100 Teams from India)
- Ranked 1st (Problem-wise) & 4th (Overall) at Amazon Code Wizard Challenge 2017 (out of 189 teams from all IITs)
- Ranked 42th at ACM ICPC 2017 Online Preliminary Round (out of around 3250 teams)
- Ranked 18th at ACM ICPC 2016 Kolkata Regionals
- Ranked 45th (India) & 95th (Global) in CodeChef Long Challenge(Sept 16) among 8,500+ Candidates
- Ranked 3rd in IIT Mandi's Design Practicum
- Ranked 3rd in Coding War, IIT Mandi Coding Competition

Hobbies

Reading, Travelling, Listening Music, Competitive Programming, Solving Puzzles, Playing Computer Games.