Rakesh Jasti | Curriculum Vitae

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Academic Qualifications

- **University of California, Merced** 2018-present
  MS in EECS
- **Indian Institute of Technology, Roorkee** 2011-2015
  B.Tech in Pulp and Paper Technology

Related Experience

- **Vision and Learning Lab, UC Merced**
  Research Assistant with Prof. Ming-Hsuan Yang *Aug 2018–Present*
- **Centre for Visual Information Technology (CVIT), IIIT-Hyderabad**
  Research Intern with Prof. C.V. Jawahar *June 2017–June 2018*
- **Mu Sigma Inc.**
  Decision Scientist *May 2015–June 2017*

Projects

- **Structured analysis of Broadcast Tennis Videos** June 2017–June 2018
  Rakesh Jasti, *Anurag Ghosh, C.V. Jawahar*
  Journal paper under review
  - We utilize computer vision methods to track players across points and detect in-point events.
  - We mine this data for Grand Slam Matches for Federer, Nadal and Djokovic to perform spatiotemporal analysis and compare their strategies and rivalries over time
- **Tracking humans in a crowded scene** Jan 2016–Apr 2017
  Client: American airlines company Mu Sigma Inc.
  Significant achievement: "Impact Award"
  - Led a team of 3 members for research on Deep Learning methods for human detection and multi-object tracking
  - Experimented with various detection & tracking techniques to keep track of humans despite occlusions
  - Integrated & optimized different modules to make the solution run at real-time speed with an accuracy of 95%
- **Computational & license resource optimization in a server farm** Oct 2015–Jan 2016
  Client: R&D Dept. of a German semiconductor manufacturing company Mu Sigma Inc.
  - Optimized the Server Farm by predicting R&D job run time, accurate upto 85%, resulting in reduction of the peak load by 7% and peak license demand by 5%
  - Used ARIMAX to forecast EDA License demand with an accuracy of 87%

- **Supply chain optimization & simulation** June 2015–Sept 2015
  Client: European steal manufacturer Mu Sigma Inc.
  - Implemented Monte Carlo simulation to assess changes in the supply chain
  - Time series forecasting using Holt's-Winter to predict changes in the supply chain
  - Built a dashboard using D3 to visualize the simulation tool; The dashboard is used for supporting client's Sales & Operations meetings
- **Metaheuristics for Global Optimization** Jan 2014–Apr 2014
  Supervised by Prof. Millie Pant IIT Roorkee
  - Surveyed Differential Evolution methods by programming them in C++
  - Improved performance by employing constraint violation methods

Skills and Courses

- **Languages:** Python, D3, R, R Markdown, MATLAB, LaTeX, SQL
- **Libraries:** OpenCV, PyTorch, TensorFlow, Scikit-learn
- **Verified MOOCs:**
  - Machine Learning by Stanford University on Coursera
  - Machine Learning Foundations: A Case Study Approach by University of Washington on Coursera
  - Machine Learning: Regression by University of Washington on Coursera
  - 6.00.1x: Introduction to Computer Science and Programming Using Python by MITx on edX
  - 6.00.2x: Introduction to Computational Thinking and Data Science by MITx on edX
  - 15.071x: The Analytics Edge by MITx on edX
- **Selected Coursework:** Computer Systems and Programming, Numerical Methods, Optimization Techniques, Computer Aided Graphics, Engineering Computation

Interests and extra-curricular activity

- **Ranked one** at 'Summer School on Machine Learning: Deep Learning', 2017 organized by CVIT, IIIT Hyderabad
- **Lead instructor at Mu Sigma's internal training program:** *Designed beginner & advanced Python & ML courses; Took classroom sessions for about 200 new recruits*
- **Sports:** *Won several medals in Athletics (long distance running) and Basketball at college level; Currently holding Blue 1 belt in Taekwondo*