JEE IAN TAM
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Education

Stanford University (GPA : 3.97)   (2015-2017)
Major : Computer Science (M.S.), Artificial Intelligence Track.
Research : Computational Vision and Geometry Lab (CVGL)

Princeton University (GPA : 3.80)   (2009 - 2013)
Major   : Mechanical and Aerospace Engineering (B.S.E.), Magna cum laude
Minors   : Computer Science , Robotics and Intelligent Systems
Ranking : Top 10% of Princeton's Class of 2013 , Top 13% of Princeton's School of Engineering Class of 2013

Work

Tableau Software – Software Engineer Intern @ Data and Performance Team   (Summer 2016)
- Used industry-standard C++ design patterns to implement query optimization techniques (Common Subexpression Elimination) in the query pipeline.
- Improved query execution times by up to 50% in Tableau workbooks.
- Gained experience in SCRUM methodologies, as well as in software collaboration (Perforce, TeamCity, Reviewboard), build and debugging (Visual Studio, Doxygen) tools.

Natel Energy – Controls/Mechatronics Engineer   (2013-2015)
- Designed and implemented a Supervisory Control and Data Acquisition system for a $10M hydropower turbine and plant, leading the testing and development of the code, electrical/electronic and mechanical control subsystems.
- Wrote and deployed code for simulation of plant dynamics to perform Hardware-In-The-Loop testing of plant control systems, ensuring safety and reliability of subsystems before installation in the field.
- Integrated sensors, modules and servers towards a condition monitoring program to predict failures. Tested and implemented machine learning techniques for unsupervised anomaly detection.

Relevant Projects [www.jeeian.com]

Identification of active webcam streams using Machine Learning through OpenCV and Caffe
- Implemented and applied Gaussian Mixture Model to detect and track foreground objects against background images among 2000+ live webcam streams.

Yelp Restaurant Photo Classification challenge using Convolutional Neural Networks through Keras/Theano
- Top 50 ranking on Kaggle leaderboards with F-1 score of 0.75.
- Able to consistently distinguish between lunch and dinner photos.

Autonomous 3D Mapping of Indoor Spaces through ROS
- Implemented robot control system in ROS to create 3D map of large indoor spaces via RGBD cameras.
- Maps created in real-time using 3D reconstruction framework (BundleFusion), with globally bundle-adjusted poses based on sparse feature correspondences and dense geometric/photometric matching.

Applying 3D effects to 2D videos using Deep Learning through MatConvNet
- Create 3D effect of objects "popping" out towards the camera by placing split-depth lines in ordinary video.
- Markov Random Field for moving object segmentation across video frames.
- Deep Convolutional Neural Field model to perform depth estimation on video frames.

Relevant Coursework

Computer Systems (A), Machine Learning (A), Computer / Network Security (A), Computer Networking (pending)