OMKAR RANADIVE

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EDUCATION

Northwestern University — **Evanston, Illinois**
Master of Science in Computer Science — *September 2019 - Present*

K.J Somaiya College of Engineering — **Mumbai, India**
Bachelor of Technology in Computer Engineering, CGPA: 8.99/10 — *August 2015 – May 2019*

- **Relevant coursework:** AI, Machine Learning (Topper), Neural Nets, Image Analysis (Topper), Fundamentals of Programming (10/10, AP), Data Structures, Algorithms, Computer Architecture (10/10), Operating Systems (Topper)

WORK EXPERIENCE

K.J Somaiya College of Engineering — **Mumbai, India**
Deep Learning Intern — *January 2018 – April 2018*

- Researched k-shot learning methodologies and developed a facial recognition system which can be trained on limited data.
- The system gives 100% accuracy for k=3 and subjects less than 20. For 20-30 subjects and k=3, accuracy ranges from 80 to 90%.

Accelo Innovation — **Mumbai, India**
Machine Learning Intern — *August 2017 – October 2017*

- Implemented depth mapping module using Stereo Vision and achieved a 98% accuracy (2 cm error) for objects up to 5m away. Objects 20m away were estimated with 95% accuracy.
- Implemented object detection module with a combination of Haar Cascades, Histogram of Gradients and a CNN model.
- Implemented lane detection module using Inverse Perspective Mapping.

PAPERS

- Karan Joisher, Suhaib Khan, Omkar Ranadive. "**Simulation Environment for Development and Testing of Autonomous Learning Agents"**. Presented at ICAST 2019, published in Elsevier-SSRN, April 2019.
- Omkar Ranadive and Dhiti Thakkar. **"k-Shot Learning for Face Recognition".** International Journal of Computer Applications 181(18):43-48, September 2018.
- Karan Joisher, Omkar Ranadive, Suhaib Khan. **"Framework for low cost driver-assistance system"**. Winner of IEEE Technical Paper Presentation, Abhiyantriki, 2017.

PROJECTS

- **Simulation Environment for Development and Testing of Autonomous Learning Agents, Final Year Project:** Built a virtual environment for autonomous driving agents which allows data capturing at 60+ FPS, simulates pedestrian and vehicular traffic and acts as a plug and play interface for reinforcement and supervised learning agents.
- **Password Cracking and Strengthening Tool:** Programmed a GUI based tool in Python for cracking passwords which can run different attacks and has adjustable parameters. It also suggests easy to remember strong passwords.
- **Context Aware Searching:** Created a program which predicts related keywords based on input query using N-Gram Model and a Neural Embedding Network.
- **Credit Card Fraud Detector:** Developed a credit card fraud detector which detects fraudulent transactions using Anomaly Detection.
- **Poetry Writer AI:** Developed a poetry writer which learns to write poetry using N-Gram Model.
- **Movie Recommender and Scraper:** Implemented a movie recommender system which forms the database by scraping information from the internet and recommends movies based on past user preferences.

SKILLS

Programming Languages: Python, Java, C++, C
Libraries: Tensorflow, Pytorch, OpenCV, Numpy, Scikit-learn, Pandas, NLTK, OpenAI-gym, Keras, TFLearn
Analytics: PostgreSQL, MySQL, MATLAB, Tableau, Matplotlib

CO-CURRICULARS

CSI KJSCE, Student's Chapter — **Mumbai, India**
Second Year Representative and First Year Representative — *March 2016 – July 2017*

- Created content, coding questions for coding competitions and technical workshops.
- Taught in workshops like Machine Learning and Cryptography and managed over 20+ events and seminars.

CERTIFICATIONS

- Machine Learning by Stanford University on Coursera, June 2017.
- Deep Learning Specialization by DeepLearning.AI on Coursera, February 2018.