Aditya Jain

jainadit@usc.edu | +1 (323) 986-9260 | Linkedin | Github | adityajain.me

Education

- **University of Southern California, Los Angeles, CA** — Jan 2021 - Present
  Master of Science (Computer Science) — **GPA: 4.0/4.0**
  Coursework : Analysis of Algorithms, Foundations of Artificial Intelligence, Data Mining
- **University of Pune, India** — Aug 2014 - Jun 2018
  Bachelor of Engineering (Computer Science) — **Aggregate: 74% (3.6/4.0)**
  Coursework : Data Structures, Operating Systems, Data Warehousing, Cloud Computing, Software Engineering

Technical Skills

- **Languages:** Python, Java, C++, Javascript, SQL, HTML
- **Databases:** MySql, MongoDb, Redis
- **Machine Learning:** scikit-learn, Tensorflow, Keras, Pytorch, tensorflow-serving
- **Tools and Frameworks**: pandas, numpy, pySpark, Git, Docker, gRPC

Experience

- **USC Institute of Creative Technologies** — Feb 2021 - Present
  Student Worker (RA - Machine Learning) | Part-Time | Python, sklearn, numpy, Git
  - Researched on techniques to improve performance of OpenTutor answer classifier and resolve cold-start problem.
  - Implemented a hierarchical clustering algorithm to find clusters of similar answers in lesson dataset and their clusteroids were taken as candidate answers. Later similarity with those candidate answers are used as features.
- **Cognizant Technology Solutions** — Sep 2018 - Dec 2020
  Associate Projects (Data Science) | Full Time
  - **Search-ad click prediction | Python, keras, pandas, tf-serving, gRPC, sklearn**
    - Researched on various NLP techniques to improve ad click through rate of existing system by 10%.
    - Worked on knowledge distillation to train CLSM (Convolutional Latent Semantic Model) using BERT Base.
    - Deployed CLSM model using tf-serving over gRPC for improving query response time to 5 ms.
  - **Medicare Star Analytics (Healthcare) | Python, sklearn, pandas, numpy, matplotlib, seaborn**
    - Developed analytical and ML models to assist customers' marketing team in identifying right and influential population for various outreach programs to improve overall STAR rating of the Medicare plans.
    - Built ML models to get probability of patient's health decline (bladder issues, mental/physical health decline, etc) leveraging his/her medical records. Achieved .75 AUC score using gradient boosting on decision trees.

Projects - *https://projects.adityajain.me*

- **AI Checkers Agent :** Implemented checkers AI Agent using mini-max algorithm with alpha-beta pruning to compete against other players' agent in a competition. *Link*
- **Kinship detection using faces :** Used VGG-Facenet to generate face embedding and trained a siamese network architecture to get kinship probability. Achieved 79.2 AUC in Kaggle test dataset. *Link*
- **NER/POS Tagging Web App :** Trained an LSTM based seq2seq model to tag all words of paragraph to their Named Entity or Part of Speech. Deployed model using Flask and docker. *Link*
- **Flappy Bird RL Agent :** Trained a Reinforcement Learning agent using Deep Q-Learning on a Double Dueling Network Architecture with Prioritized Experience Replay to play Flappy Bird Game. *Link*

Leadership and Achievements

- Ranked 6th among 250 students in checkers AI agent competition for "Foundations of AI" course at USC. **Mar 2021**
- Runner-Up in Smart India Hackathon '17 among 300 teams nationwide. **Apr 2017**
- Among top 8 finalist from 100 participants in Infosys Techzooka '16. **Oct 2016**
- Organizer and Lecturer in a national level event called "Linuxication" at MIT, Pune. **Mar 2016/2017/2018**