

Aditya Jain

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EDUCATION

University of Southern California, Los Angeles, CA

Jan 2021 - Dec 2022

Master of Science (Computer Science)

GPA: 4.0/4.0 (Honors)

Coursework : Analysis of Algorithms, Foundations of Artificial Intelligence, Data Mining, Database Systems, ML for Games

University of Pune, India

Aug 2014 - Jun 2018

Bachelor of Engineering (Computer Engineering)

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, CSS, HTML, Object Oriented Programming
- **Databases:** MySQL, MongoDB, Redis, SQL Server
- **Machine Learning:** Scikit-learn, Pandas, Numpy, Keras, Tensorflow, Pytorch, SciPy, NLTK, matplotlib, seaborn, Statistics
- **Tools and Frameworks:** Flask, pySpark, Git, Docker, Kubernetes, gRPC, GraphQL

EXPERIENCE

Cognizant Technology Solutions

Sep 2018 - Jan 2021

Associate Projects (Data Science) | Python, SQL, Keras, sklearn, pandas, tf-serving, Docker

- Improved ad click-through rate by 10% and query response time to 5 ms using NLP and CLSM model. Deployed the model on Docker over the gRPC interface and used Redis for caching and data management.
- Developed analytical and ML models to identify influential population for outreach programs and predict patient's health decline with .75 AUC score. Leveraged medical records and used gradient boosting on decision trees.
- Created data visualizations and reports to support analytical models in client presentations.

Salesforce, Inc

May 2022 - Aug 2022

Software Engineering Intern | Python, Pandas, PySpark, Docker, Orchestration, Argus

- Built an automated monitoring system to track Einstein Search metrics over time and detect anomalies with 0.98 F1 Score.
- Used pySpark to support parallelism over multiple metric definitions and org-ids to increase scalability by 150 times.
- Developed code for deploying the designed framework on hawking orchestration to support daily runs on production.

USC Institute of Creative Technologies

Feb 2021 - May 2022

Student Worker (RA - Machine Learning) | Python, pytest, JavaScript, mongoDB

- Researched techniques to improve performance of automatic answer grading system in Opentutor (a dialog based learning platform) and resolve the cold-start problem.
- Implemented a clustering algorithm to group and identify different type of correct answers for an expectation. Used cluster center of each group as features to improve grading system accuracy to 85%.
- Developed ML pipeline for grading system and contributed in developing python based web API interface for this system.
- Performed unit testing via pytest to compare the performance of models after different tweaks or improvements.

PROJECTS - <https://projects.adityajain.me>

AI Checkers Agent | Python | [Link](#)

- Implemented checkers AI Agent in Python using mini-max algorithm with α - β pruning to compete against other agents.
- Implemented agent ranked 6th among 250 students in checkers AI agent competition for "Foundation of AI" course at USC.

Kinship Detection using Faces | Python, Keras, numpy, OpenCV, Computer Vision | [Link](#)

- Used VGG-Facenet to generate face embedding and trained a siamese network architecture to get kinship probability.
- Performed image augmentation to increase dataset size and achieved 0.79 AUC using Kaggle Dataset.

NER/POS Tagging Web Application | Python, Keras, numpy, Flask, Docker, HTML/CSS, JavaScript | [Link](#)

- Trained an LSTM based seq2seq model using Keras to tag all words of paragraph to their Named Entity or Part of Speech.
- Developed an web interface using Flask API to interact with the model and finally deployed app as a docker container.

Biometric Authentication Android App | Java, Node.js, Express.js, mongoDB, XML, HTML, CSS | [Link](#)

- Developed an android app to perform fingerprint based authentication of candidates to prevent impersonation in exams.
- Built an API using Node.js to modify/fetch data on mongoDB server using API requests sent from Retrofit in android.

LEADERSHIP AND ACHIEVEMENTS

- Appointed as Teaching Assistant for Applied Natural Language Processing (CSCI-544) class of 250 students at USC. **Fall 2022**
- 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**