

EDUCATION

Stony Brook University

Master of Science in Computer Science, Graduating Dec 2020, GPA: 3.85/4.0

Stony Brook, NY

Aug 2019 – **Present**

- Data Science, Natural Language Processing, Computer Vision, Big Data, Probability & Statistics.
- Teaching Assistant: Programming Abstractions (Fall '19), Software Engineering (Spring '20, Fall '21).

University of Mumbai

Bachelor of Engineering in Information Technology; GPA: 3.9/4.0

Mumbai, India

Aug 2011 – May 2015

- Data Structures & Algorithms, Discrete Maths, Software Engineering, Data Mining, Operating Systems

PUBLICATIONS

Querying Across Genres To Retrieve Research That Supports Medical Claims Made In News

Nov 2020

Empirical Methods in Natural Language Processing (EMNLP 2020)

PROJECTS

- **Comment Toxicity Detection:** Achieved an AUC score of 0.98+ with creative pre-processing techniques coupled with Bi-GRU & BERT for multi-class classification of toxicity levels in Wikipedia comments.
- **Summarizing Gameplay:** Leveraged live stream comments to summarize gameplay & sentiment analysis to inform e-sports players of crowd sentiment as feedback for immersive gameplay experience using Transformers & NLTK.
- **Video Action Classification:** Compared LSTM v/s SVM for action classification task on the UCF101 dataset. Leveraged Transfer Learning to compute features for 60000 video frames with limited compute resources.
- **3D Pose Estimation:** Estimated 3D pose co-ordinates of humans by regressing over their 2D co-ordinates only using Deep Neural Networks. Experimented with Kalman Filters for correcting noisy measurements due to faulty sensors.
- **Chess Rating Prediction:** Evaluated Random Forests, Gradient Boosting over novel features extracted from moves in 100k chess games to predict Elo ratings. Feature extraction run on distributed nodes using OpenMP for 15x speed.
- **Understanding Infant Mortality:** Applied Linear Regression to suggest priority actions to reduce Infant Mortality Rate based on 16.8GB of health & social records of 3M women using Dask & Apache Spark for parallel computation.
- **HoldingWilly 🍏:** Built iOS app for displaying real-time scores, stats & analysis of live cricket matches in under 30 days.
- **WaveView 🎧 🌐:** Created Android/Java library for rendering and animating sinusoidal waves with 10k+ downloads.

EXPERIENCE

PlayStation, Software Engineer Intern

May 2020 – Aug 2020

- Built Deep Learning pipeline to improve perceived quality of video by enhancing regions with text. Reduced inference time by ~75% for text detection under challenging constraints without compromising on precision & recall. Evaluated multiple lightweight backbone networks to further improve inference speed by 2x-4x.
- Developed a web-based tool using Flask, HTML & JavaScript, to help identify incorrect annotations leading to increase in precision & recall of text detection by 1-2%.

JP Morgan Chase & Co., Associate Software Engineer

May 2017 – Jul 2019

- Redesigned server-side services to support web-based client & streaming of real-time data using WebSockets. Improved app performance via ~70% reduction in payload size & boosted reliability using micro-services architecture with Spring Cloud.
- Developed non-intrusive ways to gather, store, visualize and analyze metrics using Elastic, Logstash & Kibana for latency, in the order of 100ms, across micro-services to identify bottlenecks and performance improvement options.

LiveFiesta, Lead Android Developer

Jun 2016 – Jan 2017

- Led a team of 4 in the design & development of an Android application with an average rating of 4.5+ for customers to book tickets to events. Leveraged MVP architecture, Dependency Injection & TDD using RxJava, Dagger & Espresso.
- Reduced customer entry time to events by 50%, shortened queue lengths & cut losses due to fake ticket duplication & untracked re-entrants by developing a utility Android application to redeem tickets and track entrants.

TechGenium, Software Developer & Partner

Jun 2015 – May 2016

TECHNICAL SKILLS

- **Languages:** Proficient in Python & Java, Familiar with C & C++, JavaScript, SQL
- **Frameworks & Libraries:** TensorFlow, Keras, PyTorch, scikit-learn, Spring, Android, iOS, Docker, Kubernetes, Dask, Spark, MySQL, MongoDB
- **Build Tools:** Git, Bash, Linux Shell Scripting