Narayan Acharya

narayan.acharya@stonybrook.edu

/narayanacharya6 /in/narayan-acharya /narayanacharya.com +1 (631) 307 6395

Education

Stony Brook University *Stony Brook, NY*

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

Bachelor of Engineering in Information Technology; GPA: 3.9/4.0 *Aug 2011 – May 2015*

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

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.
- Developed a web-based tool using Flask, HTML & JavaScript, to help identify incorrect annotations leading to an 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 Elasticsearch, Logstash & Kibana for latency, in the order of 100ms, across micro-services to identify bottlenecks and performance improvement options.
- Optimized data collection mechanisms using REST APIs to track and compare client portfolio pre & post trades. This was used by compliance teams to generate risk reports on demand, increasing granularity in understanding firm's risk exposure.
- Designed a generic framework to make database integration and migration to new database technologies easier & faster.
- Saved 4 man-hours/release cycle by automating pre-release performance testing using in-house CI/CD and build tools.

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*

Projects

- **Chess Rating Prediction**: Used 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 processing speed.
- **Understanding Infant Mortality**: Applied Linear Regression using Dask, MapReduce & Spark to suggest priority actions for districts to reduce Infant Mortality Rate based on 3 million (16.8GB) health & social records of women.
- **Comment Toxicity Detection**: Achieved an AUC score of 0.98+ with creative pre-processing techniques coupled with Bi-GRU & BERT for multi-label classification of toxicity levels in 160k Wikipedia comments and 6 levels of toxicity.
- **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.
- **HoldingWilley** : 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/animating sinusoidal waves with 10k+ downloads.

Technical Skills

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