Narayan Acharya

narayan.acharya@stonybrook.edu
/narayanacharya6 /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: 3.8/4.0 — *Aug 2019 – **Present***
  - Teaching Assistant: Programming Abstractions (Fall '19), Software Engineering (Spring '20).
  - Data Science, Natural Language Processing, Computer Vision, Big Data Analytics, Probability & Statistics.
- **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, Object Oriented Analysis & Design

Projects

- **Video Action Classification**: Compared LSTM v/s SVM for action classification task on the UCF101 data. Used Transfer Learning to compute features for 60000 video frames with limited compute resources.
- **Scene Recognition**: Leveraged Deep Learning coupled with Transfer Learning using CNN-based models for scene recognition with 89% accuracy.
- **Pose Estimation**: Estimated 3D pose co-ordinates of humans by regressing over their known 2D co-ordinates using Neural Networks on the Human36M dataset.
- **Chess Rating Prediction**: Used regression techniques, Random Forests and Gradient Boosting, over novel features extracted from moves played in 100,000 Chess games to predict Elo ratings of players. Complex feature extraction run on distributed compute nodes in parallel using OpenMP API for 15 times faster processing.
- **Comment Toxicity Detection**: Compared use of GloVE & fastText word embeddings on multi-class classification of toxicity levels in Wikipedia comments. Achieved an AUC score of 0.98+ using creative text pre-processing techniques along with Bi-GRU & BERT.
- **Sentence Representations**: Understanding sentence representations using Perturbation Analysis on sentiment analysis task with IMDb movie reviews using neural networks DAN and GRU.
- **HoldingWilley** : An iOS app for displaying real-time scores, stats & analysis of cricket matches.
- **WaveView** : Open-source Android/Java library for rendering and animating sinusoidal waves

Publication

- **Visualization of Mechanics Problems based on Natural Language Processing**
  International Journal of Computer Applications — *Apr 2015*

Professional Experience

- **JP Morgan Chase & Co.** — Mumbai, India
  Associate (Software Engineer) — *May 2017 – Jul 2019*
  - Redesigned server-side services to support web-based client & streaming real-time data using WebSockets. Improved performance using ∼70% smaller payloads & boosted reliability using micro-services architecture
  - Developed data collection mechanisms to track and compare client portfolio before and after trades, for reporting over REST APIs to compliance teams that helped generate reports instantly instead of EoD.
  - Implemented automated performance testing using in-house CI/CD and build tools to reduce developer intervention and save at least 4 man-hours/release cycle.
- **LiveFiesta** — Mumbai, India
  Lead Android Developer — *Jun 2016 – Jan 2017*
  - Designed and developed Android application with an average rating of 4.5+ for customers to book tickets to events. Leveraged MVP architecture, Dependency Injection & TDD for testable and maintainable code.
  - Developed utility application to redeem tickets for convenient one-time entry to customers reducing entry time by 50% & cut losses due to fake ticket duplication & untracked re-entrants.

Technical Skills

- **Languages & DB**: Proficient in Python & Java, experience with Swift, C, C++, SQL, NoSQL, MongoDB
- **Frameworks & Libraries**: TensorFlow, Keras, PyTorch, NLTK, spaCy, OpenCV, Pandas, NumPy, scikit-learn, Matplotlib, Spring, Android, iOS, MapReduce, Spark.
- **Build & Other Tools**: Git, Gradle, Maven, Jenkins, Bash, Linux.