Narayan Acharya

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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

- **Comment Toxicity Detection**: Compared use of GloVE & fastText word embeddings on multi-class classification of toxicity levels in Wikipedia comments. Using Bi-GRU & BERT achieved an AUC of 0.98+.
- **Chess Rating Prediction**: Used regression techniques like Random Forests and Gradient Boosting over novel features extracted from moves played in 100k Chess games to predict Elo ratings. Complex feature extraction run on distributed compute nodes in parallel using OpenMP API for 15 times faster processing.
- **Sentence Representation**: Understanding sentence representations using Perturbation Analysis on sentiment analysis task with IMDb movie reviews using DAN and GRU.
- **Word Embeddings**: Compared embeddings learnt using Cross Entropy v/s Noise Contrastive Estimation Loss by measuring their performance on the word analogy task.
- **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.
- **Pose Estimation**: Estimated 3D pose co-ordinates of humans by regressing over their known 2D co-ordinates using Neural Networks on the Human36M dataset.
- **HoldingWilley** : An iOS app for displaying real-time scores, stats & analysis of cricket matches.
- **WaveView** : An open-source Android/Java library for drawing 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 using MVP architecture & TDD for clean, testable and maintainable code.
  - Developed utility application to redeem tickets for convenient one-time entry to customers reducing entry time by 50% which cut losses due to ticket duplication & untracked re-entrants.

Technical Skills

- **Languages**: Proficient in Python & Java, experience with Swift, C, C++, HTML, CSS, JS, SQL
- **Database Technologies**: MongoDB, SQLite, MySQL
- **Frameworks**: TensorFlow, PyTorch, OpenCV, Pandas, Numpy, Scikit-Learn, Spring, Android, iOS.
- **Build & Other Tools**: Git, Gradle, Maven, Jenkins, Bash, Linux.