Narayan Acharya

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🏛 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 video quality by enhancing regions with text. Reduced inference time by ~75% for text detection under challenging constraints without reducing precision & recall.
- Evaluated multiple lightweight backbone networks, ResNet, PVANet, MobileNetV2, and techniques like quanitzation, post-processing optimization to further improve inference speed by 2x-4x.
- Developed a web dashboard using Flask, HTML & JavaScript, to help identify incorrect annotations which helped increase 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 Angular client & streaming of real-time data using WebSockets. Improved app performance with ~70% reduction in payload & boosted reliability using micro-services architecture with Spring Cloud.
- Developed non-intrusive ways to gather, store, visualize and analyze latency metrics using Elasticsearch, Logstash & Kibana, in the order of 100ms, across micro-services to identify bottlenecks in high throughput services.
- Optimized data collection mechanisms using REST APIs to track and compare client portfolio pre & post trade to generate risk reports on demand, increasing granularity in understanding firm's risk exposure.
- Designed a generic framework for database migration efforts to aid transition from PostgreSQL to MongoDB.
- Automated pre-release performance tests using in-house CI/CD & build tools saving man-hours across teams.

LiveFiesta, *Lead Android Developer*   *Jun 2016 – Jan 2017*

- Led a team of 4 in the design & development of an Android application (rating 4.5+) for users 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.

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.
- **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.
- **HoldingWilley** : iOS app for displaying real-time scores, stats & analysis of live cricket matches.
- **WaveView** : 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, Pandas, Numpy, Kafka, Docker, Kubernetes, Dask, Hadoop, Spark, MySQL, PostgreSQL, MongoDB
- **Build Tools**: Git, Gradle, Maven, Jenkins, Bash, Linux, Google Cloud Platform(GCP)