Narayan Acharya

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Experience

dMetrics, *Machine Learning Engineer* *Mar 2021 – Present*

- Developed a Fact-Opinion classifier for classifying 100M+ documents using hand-crafted features coupled with SVM. Classifier had 97% F1-performance of and 10x faster inference in comparison to Transformer models using CPU compute.
- Developed process to score sources of documents based on a modified version of Borda rank aggregation algorithm. Aggregated rank was a weighted combination of individual rankings allowing users to add custom rankings as required.

PlayStation, *Software Engineer Intern* *May 2020 – Aug 2020*

- Built Deep Learning pipeline to improve perceived video quality by enhancing regions with text without increasing bitrate. 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 quantization, post-processing optimization to further improve inference speed by 2x-4x.

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, visualize and analyze latency metrics using Elasticsearch, Logstash & Kibana, in the order of 100ms, across micro-services to identify bottlenecks in high throughput services.

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*

Education

Stony Brook University *Stony Brook, NY*

Master of Science in Computer Science, Graduating Dec 2020, GPA: 3.85/4.0 *Aug 2019 – Dec 2020*

- Data Science, Natural Language Processing, Computer Vision, Big Data, Probability & Statistics.

University of Mumbai *Mumbai, India*

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

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.
- **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.
- **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.

Publications

Querying Across Genres for Medical Claims in News *Nov 2020*

Empirical Methods in Natural Language Processing (EMNLP 2020)

Technical Skills

- **Languages**: Proficient in Python & Java, Familiar with C & C++
- **Frameworks & Libraries**: TensorFlow, PyTorch, scikit-learn, spaCy, huggingface, Flask, OpenCV, NLTK, Pandas, Numpy, Docker, MySQL, MongoDB, Spring, Android, iOS
- **Build Tools**: Git, Bash, Linux, Amaazon Web Services (AWS), Google Cloud Platform(GCP)