Shreenivas Bharadwaj **Venkataramanan**

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Education

University of California, San Diego — *La Jolla, CA*

M.S. in Computer Science | Cum. GPA: 3.88/4 — *Sep 2018 - Mar 2020* ***(Expected)***

- Neural Networks, AI-Probabilistic Reason & Learning, Web Mining & Recommendation Systems, Natural language Processing

National Institute of Technology, Trichy — *Tiruchirappalli, India*

B.Tech. in Computer Science and Engineering | Cum. GPA: 8.31/10 — *Jul 2014 - May 2018*

Skills

Programming Languages Python, C/C++, Java, Matlab, HTML, CSS, Java Script, Bash, SQL

Frameworks and Tools Pytorch, Tensorflow, CUDA/cuBLAS/Thrust, Flask, Jquery, Git, Android Studio

Software Development Experience

Google — *Mountain View, California*

Software Engineering Intern | (C++) — *Jun 2019 - Sep 2019*

- Designed backfill system in Google Assistant micro services infrastructure to fill missing features in device request.
- Enabled data push mechanism and Integrated framework for experiments. Implemented diffing method to measure difference between two protocol buffers. Achieved 0% difference between backfill and ground truth for 100% of queries.
- Tested prototype and launched backfill with experiment controlled environment using Google's build/test/deployment tools.

Amazon — *Chennai, India*

Software Development Intern | (Java, HTML, CSS, JavaScript/Jquery, SQL, Bash) — *May 2017 - Jul 2017*

- Designed internal tool in Kindle Digital Commerce Platform to expose Kindle APIs safely to other teams.
- Reduced overhead of querying time for listing book loans by 50% using batch APIs. Used LDAP orchestrator for authentication. Implemented statistical tree summaries to save investigation time.
- Used Amazon's build/test/deployment tools and successfully deployed the project.

Research Experience

Acceleration of Vector Auto Regression with GPUs — *Indian Institute of Technology, Delhi*

Research Intern | (C++,CUDA/cuBLAS/Thrust, Matlab) — *Jul 2017 - Dec 2017*

- Accelerated Vector Auto Regression models using GPUs and computed tight bound solutions for Lasso regression models.
- Achieved 650x speedup over regular CPU code.

Named Entity Recognition — *International Institute of Information Technology, Hyderabad*

Research Intern | (Python, Tensorflow) — *May 2016 - Jul 2016*

- Performed NER task using LSTM networks and Word Embeddings.
- Improved accuracy by 15% for Hindi. Achieved 90% accuracy in English. Published in ICON-2016 conference indexed in ACL.

Projects

ChatterBot - A Text Classifier Bot — *University of California, San Diego*

Course Project | (Python, Dialogflow, Pytorch, Flask) — *Apr 2019 - Jun 2019*

- Implemented a Dialogflow chat bot which can classify text with Flask backend.
- Trained LSTM neural networks to classify text and deployed it in Flask. Designed a conversational flow for Chat Bot. Implemented delay response mechanism to handle latency for explanation queries. Optimized query latency by using cached models.
- Achieved 99% accuracy for text classification tasks and max query latency of 5s.

Other Projects and Experiences

- Text to Image using LSTM and GANs, Instrument Recognition using Pytorch, Game Strategies for GIPF game using Monte Carlo Tree Search, Dynamic MAC layer optimization using C++/NS2.
- Teaching Assistant @ UCSD for "Intro to Python" COGS 18'Spring.

Publications

Acceleration of Sparse Vector Autoregressive Modeling using GPUs

High Performance Computing, Data, and Analytics, IEEE — *2019*

Dynamic Optimization of IEEE 802.11 DCF based on Active Stations and Collision Prob.

International Journal of Digital Information and Wireless Communications — *2017*

Towards deep learning in Hindi NER: An approach to tackle the labelled data scarcity

International Conference on Natural Language Processing, ACL — *2016*