Shreenivas Bharadwaj **Venkataramanan**

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Education ___

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

M.S. in Computer Science | CGPA: 3.88/4 *Expected Mar 2020*

- **Courses**: Neural Networks, AI-Probabilistic Reason & Learning, Web Mining & Recommendation Systems, Natural language Processing
- **Teaching Assistant**: Introduction to Python

National Institute of Technology, Trichy *Tiruchirappalli, India*

B.Tech. in Computer Science and Engineering | CGPA: 8.31/10 *Graduated 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 requests from any device.
- 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 to 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 using cached models.
- Achieved 99% accuracy for text classification tasks and maximum query latency of 5s.

Other Projects and Experiences

- *Text to Image using LSTM and GANs*: Created images corresponding to text descriptions given to the system.
- *Musical Instrument Recognition using PyTorch*: Identified musical instruments from given audio samples.
- *Game Strategies for GIPF game using Monte Carlo Tree Search*: Defeated the current champion in GIPF.

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*