# 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 — *Sept 2018 - June 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 — *July 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++) — *June 2019 - September 2019*

- Designing a backfill system in the Google Assistant infrastructure. Enabled a datapush system to make configuration file changes during run time. Ran experiments in production and ramped up.
- Improved the extensibility and scaling of the current system.

**Amazon** — *Chennai, India*

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

- Designed an internal tool in the Kindle Digital Commerce Platform to expose the API safely to other teams.
- Reduced the overhead of querying time for listing book loans by roughly 50% using batch APIs. Used LDAP orchestrator for authentication. Implemented statistical tree summaries to save time in investigation.
- 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) — *July 2017 - Dec 2017*

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

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

Research Intern | (Python, Tensorflow) — *May 2016 - July 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) — *April 2019 - June 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 the Chat Bot. Implemented a delay response mechanism to handle latency for explanation queries. Optimized query latency by using cached models.
- Achieved 99% accuracy for the text classification tasks and a max query latency of 5s.

**Game Strategies for GIPF game**

B.Tech, Thesis | (C++, Python) — *Feb 2018 - May 2018*

- Analyzed and implemented various AI strategies (Monte Carlo Tree Search, Minimax).
- Defeated the current champion bot in GIPF.

**Other Projects and Experiences**

- Text to Image using LSTM and GANs (Jan 19 - Mar 19), Instrument Recognition using Pytorch (Jan 17 - April 17), Dynamic MAC layer optimization using C++/NS2 (July 16 - Dec 16).
- Teaching Assistant @ UCSD for "Intro to Python" COGS 18'Spring.

## Publications

**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**

ICON, ACL indexed — *2016*