Shreenivas Bharadwaj **Venkataramanan**

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Education

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

M.S. in Computer Science — *Sept 2018 - June 2020* ***(Expected)***

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

Software Development Experience

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 90% using batch APIs. Used LDAP orchestrator for authentication. Implemented statistical tree summaries to save time in investigation. Developed backend using the Coral framework.
- Used Amazon's build/test/deployment tools and successfully deployed the project.

Delta Force — *National Institute of Technology, Trichy*

Premier Computing Club | (Python, Flask, SQL, Android Studio) — *2015 - 2018*

- Developed a demo course management site with Flask and MySQL database to select and manage student courses.
- Collaborated and created a campus communication application in Android to notify campus events to around 1000 students.

Research Experience

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

Research Intern | (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.

MAC layer optimization, Dynamic Learning — *National Institute of Technology, Trichy*

Course Research | (C, C++, NS2) — *July 2016 - Dec 2016*

- Optimized the MAC 802.11 Contention Window mechanism. Used Newton's regression to solve complex equations.
- Increased throughput by 3% (10 Kbps). Published in IJDIWC journal.

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

Game strategies for the GIPF game — *National Institute of Technology, Trichy*

B.Tech. thesis | (C, C++, Python) — *Jan 2018 - April 2018*

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

Music Recognition and Generation

Personal Project | (Python, Pytorch) — *Jan 2017 - May 2017*

- Used LSTM neural networks with Mel Cepstral features. Music created by generating Spectrograms using Deep Convolutional GANs.
- Improved accuracy by 10% in the IRMAS dataset.

Publications

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

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

Balasubramanian, N., **Venkataramanan, S.B.** and Aathma, A.

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

ICON, ACL indexed — *2016*

Athavale, V., **Bharadwaj, S.**, Pamecha, M., Prabhu, A. and Shrivastava, M.