

# Shreenivas Bharadwaj Venkataramanan

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## Education

### University of California, San Diego

M.S. IN COMPUTER SCIENCE

La Jolla, CA

Sept 2018 - June 2020 (**Expected**)

### National Institute of Technology, Trichy

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING | CUM. GPA: 8.31/10

Tiruchirappalli, India

July 2014 - May 2018

## Skills

### Programming

C/C++, Python, Java, Matlab, HTML, CSS, Java Script, Bash, SQL, Git, LaTeX

### Frameworks

Android Studio, Tensorflow, Pytorch, JQuery, Flask, CUDA/cuBLAS/Thrust

## Software Development Experience

### Amazon

Chennai, India

SOFTWARE DEVELOPMENT INTERN | (JAVA, HTML, CSS, JAVA SCRIPT/JQUERY, SQL, BASH, CORAL FRAMEWORK)

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.
- Code reviewed, wrote high coverage unit tests, used Amazon's build/test/deployment tools and successfully deployed the project.

### Delta

Trichy, India

UNIVERSITY DEVELOPMENT CLUB MEMBER | (FLASK, SQL, ANDROID STUDIO)

2015 - 2018

- Developed inventory management site with Flask and MySQL database.
- Collaborated and created a campus communication application in Android.

## 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.