Experience

Undergraduate Research Assistant @ Machine Learning
September 2018 – Present
Machine Learning Laboratory, Computer Science @ IIT – cs.iit.edu/~ml

- Contributing to the transparent machine learning project which aims to improve the understanding of underlying data, features and hypotheses
- Developing transparent NLP models for a text classification/ recommendation problem.

Teaching Assistant
August 2017 – Present
Department of Computer Science, IIT
CS331: Data Structures and Algorithms, **Fall 2018**
CS350: Computer Organization and Assembly, **Spring 2018**
CS201: Accelerated Introduction to Computer Science, **Fall 2017**

ARC Scholar / Peer Computer Science Tutor
January 2018 – Present
Academic Resource Center, IIT
Provide peer-to-peer and group tutoring for all computer science courses at IIT

Undergraduate Research Assistant @ Distributed Systems
June 2017 – December 2017
Data-Intensive Distributed Systems Laboratory, Computer Science @ IIT - datasys.cs.iit.edu

- Profiling and optimizing scientific applications and benchmarks run on multi-node and many-core clusters.
- Participation in the Student Cluster Competition at ACM/IEEE supercomputing conference, SC17.

Skills

Web Development, Machine Learning, Cloud Computing
Sysadmin, Android Development, Systems Programming

Languages
Experienced: Python, Java, C

Prior Experience: Haskell, JavaScript, HTML/CSS, C#, SQL (MySQL, PostgreSQL)

Tools
Linux, Git, vim, bash, Windows
Android Studio, GNU/Intel compiler suites

Frameworks/ Libraries
NumPy, scikit-learn, Keras, TensorFlow, Django, Node.js

Education

Illinois Institute of Technology (IIT), Chicago, IL
B.S. in Computer Science, **GPA:** 3.914
minor in Applied Mathematics
Expected May 2019

Relevant Coursework:
Algorithms, Data Structures,
Operating Systems, Statistical Learning,
Virtual Machines, Distributed Computing,
Databases, Software Engineering

Projects

BOSSA – Interprofessional Project, IIT Real Time Communications Lab - api.iitrtclab.com
Refactored and partially redesigned the Bluetooth assisted indoor location and atmosphere data API, with a team of students, for IIT facilities department to make it compatible with a new database. Rewrote Python algorithm that determines location to make it run ~ 23 % faster

Parakeet, Hackillinois – University of Illinois at Urbana Champaign – devpost.com/software/parakeet
Utilized the CMU Sphinx voice recognition Java libraries to transcribe and timestamp lecture videos to make them smart, accessible, and searchable by content. Trained the acoustic model and the dictionary to improve recognition accuracy.

Hawkbeans, IIT – CS 595: Virtual Machines
Implemented a light-weight Java Virtual Machine in C according to the JVM reference including class loading, symbolic resolution, bytecode interpretation, exceptions, and garbage collection using mark and sweep. Helped me learn how to manage relatively large codebases.

Honors

Student Cluster Competition @ Supercomputing Conference 2017 (SCC@SC17)
Chicago Team, **second place** in North America, mentored by IIT, UChicago, Northwestern faculty and Argonne (ANL) scientists.

College of Science Dean's list, all semesters at IIT i.e. Fall '16, Spring '17, Fall '17 and Spring '18

National Mathematics Talent Competition, among **top 15 students** all over Pakistan slated for International Math Olympiad, 2016

Leadership and Involvement

Secretary, Upsilon Pi Epsilon (UPE): Computer Science Honor Society @ IIT — **August 2017 – Present**
Treasurer and Events Coordinator, Commuters Student Association @ IIT — **August 2017 – Present**
Member, Association for Computing Machinery (ACM) @ IIT — **August 2016 – Present**