Arnav Kansal

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EDUCATION

NEW YORK UNIVERSITY
NYU COURANT
Master's in Computer Science
2017-2019 | New York, New York
GPA: 3.91/4.0

INDIAN INSTITUTE OF TECHNOLOGY DELHI
BTech in Electrical ENGG.
2013-2017 | Delhi, India
Cum. GPA: 8.635/10

TEACHING

Course Assistant, NYU CS
Spring 18/19, Fall 18
Computer Systems Organization
Spring 19
Parallel Computing
Fall 18
Basic Algorithms

COURSEWORK

Systems
Operating Systems
Computer Architecture
Multicore Processing
High Performance Computing - ML
ML & AI
Statistical NLP
Advanced Machine Learning
Heuristic Problem Solving
Mathematics for Deep Learning

SKILLS

PROGRAMMING
C++ • C
Python • Java • x86 Assembly
SML/NJ • Matlab • LaTeX

SOFTWARES & TOOLS
OpenMP • MPI • CUDA / CUDNN
Apache Zookeeper • Git

OPERATING SYSTEMS
Linux • xv6

AWARDS

- State rank 1 : JEE-MAINS (AIEEE) All India rank 50 (among 1.28 million)
- Indian National Mathematics Olympiad 2012 participant, regional rank 27
- Nations top 1% Merit for NSEP (precursor to Indian National Physics Olympiad).

EXPERIENCE

CITADEL SECURITIES | Software Engineering Intern
06/04/2018 - 08/24/2018 | Low Latency Technology | Chicago, IL

- Established type safety in auto code generators for the High Frequency Hardware Development Team.
- Brought distributed capability to application configuration and discovery service management system using Apache Zookeeper.
- Implemented the entire distributed system in C++ profiled and tailored to fit the tight latency constraints.

SAMSUNG RESEARCH | Software Engineering Intern
05/12/2016 - 07/07/2016 | AP Systems | Bangalore, India
Energy Aware System

- Upgraded Linux kernel to support energy awareness in the Scheduler.
- Achieved significant increase in power gains with minimal performance impact.
- The code was written in C following Linux kernel coding style and entirely built/tested on Samsung proprietary mobile.
- Received offer to join as a research engineer in recognition of applicability of project deliverables & illustrious contributions

RESEARCH PROJECTS

PERSONALISED E-COMMERCE SEARCH Prof. Jayadeva
July 2016 - May 2017 | IITD | CIKM Cup 2016 Track 2

- Modeled the problem as a recommendation system and explored various Collaborative filtering techniques.
- Achieved a 25% increase in search quality by using Learning to Rank methods.
- Formulated a new method for finding relative feature importance using Coordinate Ascent.

TWIN SVM IMPLEMENTATION WITH FUZZY MEMBERSHIP FUNCTION Prof. Jayadeva
December 2015 | IITD

- Implemented Twin SVM in python and achieved better accuracies than conventional SVM in artificial datasets.
- Made a custom estimator for use in the Sci-kit (sklearn) library.

COURSE PROJECTS

SARCASM DETECTION IN TWEETS | NYU

- Extracted Lexical Features: n-gram features, dictionary based feats from custom mined Twitter data to solve as a Classification problem.
- Used LSTMs to exploit incongruity in sequential data with features such as POS tags and sentiment features.
- Incorporated word embeddings for use in a distance function which weighed similar and anti-similar words.

PARALLEL MATRIX FACTORIZATION IN OPENMP | NYU

- Developed a Stochastic Gradient Descent based parallel method for factorizing large shared memory matrix factorization problem in C++.
- The method involved dramatically reducing the cache-miss rate and addressing the load balance of threads.