Arnav Kansal

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EDUCATION

COURANT INSTITUTE OF MATHEMATICAL SCIENCES, NYU

Master's in Computer Science
2017-2019 | New York, New York
GPA: 3.9/4.0

INDIAN INSTITUTE OF TECHNOLOGY DELHI

BTech in Electrical ENGG.
2013-2017 | Delhi, India
Cum. GPA: 8.635/10

LINKS

Github:// **AK101111**
LinkedIn:// **Arnavkansal**

COURSEWORK

ML & AI
Statistical Natural Language Processing
Probabilistic Graphical Models
Mathematics for Deep Learning
Machine Learning
Computer Vision
Systems
Operating Systems
Computer Architecture
Multicore Processing
Digital Electronics
Design Practices, Systems Lab
Others
Probability and Stochastic Processes
Linear Algebra and Diff. Equations
Analysis and Design of Algorithms
Macroeconomics
Econometric Methods
Course Assistant, NYU CS
Computer Systems Organization
Basic Algorithms

SKILLS

PROGRAMMING

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

SOFTWARES

Apache Zookeeper • Git

OPERATING SYSTEMS

Linux • xv6 • JOS

VOLUNTEERING

TEACHER

National Service Scheme, IITD
Munirka Slum Teaching Project
Volunteered and taught a group of 60+ slum students on weekends.

EXPERIENCE

CITADEL SECURITIES | Software Engineering Intern

June 2018 - Present | Low Latency Technology | Chicago, IL

- Implementing distributed functionality for a application configuration and discovery service management system using Apache Zookeeper.
- Assisting in high frequency hardware development.

SAMSUNG RESEARCH | Software Engineering Intern

May 2016 - July 2016 | AP Systems | Bangalore, India
Energy Aware System

- Upgraded the 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 PrePlacement Offer for a research engineer in recognition of applicability of project deliverables & illustrious contribution as an intern

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 sarcastic text features 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

- Implemented 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.

LZW COMPRESSION | IIT DELHI

- Implemented LZW compression/decompression algorithm in C++.
- Handled large text files 10MB and achieved up to 40% compression even in small files (few Kbs).

AWARDS

- State rank 1 in JEE-MAINS, all India rank 50 among the 1.28 million applicants.
- Qualified for KVPY Fellowship 2012, organized by IISc to motivate students to pursue career in research.
- Secured rank 27 (Among the top 300 students) and qualified for INMO (Indian National Mathematics Olympiad) 2012, organized by HBCSE.
- Selected for INPhO (Indian National Physics Olympiad), INAO (Indian National Astronomy Olympiad) organized by HBCSE.