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jnaayush
EDUCATION

AAYUSH JAIN

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Available: January - August 2019

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NORTHEASTERN UNIVERSITY, BOSTON, MA

Expected Apr 2020

College of Computer and Information Science

Candidate for Master of Science in Computer Science

GPA 3.89/4

- Course Work: Computer Systems, Algorithms, Object Oriented Design, Discrete and Data Structure
- Machine Learning (Ongoing), Information Retrieval (Ongoing)

INDIAN INSTITUTE OF TECHNOLOGY (IIT), KHARAGPUR, INDIA

Jul 2009 - Jun 2014

Bachelors (Honors) & Masters (Honors) of Science in Exploration Geophysics

- Relevant Courses: Programming and Data Structure, Partial Differential Eqn, Transform Calculus, Inverse Theory

ACADEMIC PROJECTS

- Performance Analysis of Sorting Algorithms | Northeastern University Jul 2018 - Aug 2018
 - Analyzed three sorting algorithms on parameters such as cache misses, page faults etc. using *libperf* in C
 - Wrote Python script for automation for sort selection, data generation and result plotting through matplotlib
 - Utilized GCC compiler hooks for measurements and found quick sort to be 20% more efficient than merge sort
- Thread safe memory allocator based on pool allocation strategy | Northeastern University Jun 2018 - Jul 2018
 - Implemented memory allocator utilizing *pthreads* employable through compile-time inter-positioning
 - Maintained multiple arenas containing several free lists of size 256KB each in pool allocator
- Animation generator based on MVC design pattern | Northeastern University March 2018 - Apr 2018
 - Pair-programmed to generate GUI based SVG animation viewer and its text transcript by processing input file
 - Implemented the MVC design pattern in Java to store parsed data and generate different views based on user input

TECHNICAL KNOWLEDGE

Languages: C, Java, Python, HTML, CSS
Systems: UNIX, Windows, Macintosh OS
IDE: IntelliJ Idea, Xcode, Vim

WORK EXPERIENCE

- Teaching Assistant | Northeastern University, Boston, MA Jan 2018 - Present
 - Courses: Discrete and Data Structure, Algorithms, Computer Systems, Object Oriented Design
 - Guided 30+ students to help reinforce concepts, complete assignments and improve performance
 - Graded 300+ assignments, labs & quizzes and provided feedback to students & instructor on course progress
- Product Developer | SensoVision Systems, Bangalore, India Aug 2016 - Aug 2017
Sensovision is a fast growing early stage startup working in the field of computer vision - <http://www.sensoviz.com>
 - Envisioned and built an optical sorting machine using OpenCV to eliminate manual intervention in quality control
 - Defined hardware specifications, negotiated with suppliers and procured camera & illumination systems
 - Extended open source softwares *OpenSfm* and *Q Ground Control* to add multiple custom features
 - Re-designed and built company website resulting in an increase in hit rate by 2x
- Teaching Associate | R.A.C.E., Bhopal, India May 2015 - Jul 2016
 - Taught Mathematics & prepared practice material, received high remarks for creativity of classroom lessons
- Geophysicist | Central Mine Planning and Design Institute, Nagpur, India Aug 2014 - May 2015
 - Delineated coal deposits through field surveys, analysis & interpretation of well-logging and electrical profiling data
 - Saved \approx ₹1M in combined drill bit cost and man hours by locating and avoiding subsurface volcanic rocks

LEADERSHIP EXPERIENCE | EXTRACIRRICULAR

- Mentored and guided a group of students to build an autonomous robot and taught basics of micro-controllers
- Led a team of 7 for organizing and executing basketball competition in annual sports fest of IIT Kharagpur
- Organized an image-processing event in Kshitij 2010 drawing participation from all over India
- Guitar enthusiast, have played at competitions during the undergraduate years