AAYUSH JAIN

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Available: January - August 2019   in aayush-jain-37319048

EDUCATION

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 *(C, Python, libperf, matplotlib, numpy)*   Jul 2018 - Aug 2018
- Developed a tool to analyze sorting algorithms on metrics such as cache misses, page faults etc. using *libperf* in C
- Wrote Python script for automation for selecting sort, generating data and plotting results through matplotlib
- Utilized GCC compiler hooks to study 3 sorts and found quick sort to be 20% more efficient than merge sort

— Animation generator based on MVC design pattern *(Java, Swing, Awt, Xml)*   March 2018 - Apr 2018
- Pair-programmed to generate GUI based SVG animation viewer and its text transcript by processing input file
- Followed MVC design pattern to store parsed data and generate different views based on user input

— Data Analysis *(Java, Linear regression, K-means clustering)*   Jan 2018 - Feb 2018
- Implemented linear regression for best fit line using mean squared error cost function
- Clustered points in 2-D plane implementing *k-means* clustering algorithm

— Explode : Robotics Competition, Kshitij 2010 *(C, Embedded Systems, AVR, microcontroller)*   Dec 2009 - Jan 2010
- Built circuits & wrote code for autonomous robots to navigate grid, detect and avoid land mines
- Finished 2nd in largest robotics competition in Eastern India along with 3 team members

TECHNICAL KNOWLEDGE

Languages: C, Java, Python, HTML, CSS

WORK EXPERIENCE

— Teaching Assistant | Northeastern University, Boston, MA   Jan 2018 - Present
- Courses: Discrete and Data Structure, Algorithms, Computer Systems, Object Oriented Design
- Guiding students to help reinforce concepts, complete assignments and improve performance
- Assisting professor in grading assignments, conducting labs & quizzes and monitored students' 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 to add multiple custom features required for in-house products
- 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 ≈ ₹1M in combined drill bit cost and man hours by locating and avoiding subsurface volcanic rocks

LEADERSHIP EXPERIENCE | EXTRACURRICULAR

- 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
- Interests : Tech-DIY ★ Basketball ★ Card games ★ Guitar ★ Traveling