Vaastav Anand

Computer Science, Year 4

vaastav.anand05@gmail.com | www.vaastavanand.com | +1 (778) 223-5554

TECHNICAL SKILLS

Languages	: C++, Python, C, Java, Julia, R, JavaScript, CUDA
Tools	: GDB, IntelliJ, Eclipse, Visual Studio, Git, Perforce
Others	: SQL, Qt, Unix, Gtest, Boost Test

WORK EXPERIENCE

Software Engineering Intern, MODS Team, NVIDIA (C++) **May 2017 – Aug 2017**

- Implemented memory repair sequences as scripts to repair bad parts of High Bandwidth Memory (HBM). This resulted in increasing GPU yield.
- Designed, developed and implemented a CUDA based linpack test to stress every bit of memory to weed out GPUs with bad memory in the early stages of production.
- Designed and deployed an internal website that reported every release version of the MODS application, the last change in the release and a link to download the release.
- Ported CUDA threading stress tests from CUDA teams to MODS.

Software Engineering Intern, MODS Team, NVIDIA (C++) **May 2016 – Aug 2016**

- Implemented a synchronization option for CUDA based linpack stress tests in MODS to synchronize CUDA kernel launches within 30µs across multiple GPUs in multi-GPU systems like DGX systems.
- Ported MODS code and windows builds to msvc140 from msvc90 to enable C++11.

Software Developer, Sequoia, Thinkbox Software (C++) **Sep 2015 – Apr 2016**

- Designed, developed and implemented the frontend and backend of the 3D PDF export option in Sequoia which allowed users to export their 3D models in PDF files by implementing a writer class for the U3D file format.
- Implemented import options for Lidar point cloud file formats of scanners from Riegl and Zoller + Fröhlich.
- Implemented binary string obfuscation making the licensing system more secure.
- Ported Unit tests from Boost Test Framework to Google Test Framework.

Research Assistant, Interdisciplinary Speech Research Lab (Python) **Nov 2017 – current**

- Will create a game that does pitch detection to measure the accuracy of pitch of phrases and words in tonal languages.

Teaching Assistant, UBC CS Department **Sep 2014 – current**

- Currently a TA for CPSC 415: Advanced Operating Systems.
- Previously a TA for Intermediate Algorithm Design, Computer Systems courses.
- Lab Planner and Lead TA for CPSC 121 Models of Computation in Summer 2015.

PROJECTS

IDS Python Module (Python, C) **Sep 2017 – current**

- A python wrapper module around the C library for IDS uEye Cameras. Developed for Frostad Research Group in Chemical Engineering Department at UBC.

Coast Capital Contractor Records Management System **Sep 2017 – current**

- Project Manager for creating a system to manage Contractor Records at Coast Capital Savings Credit Union. Backend of the system is written in Java and MySQL and frontend uses React and a RESTful API and deployed on AWS.

HACKATHONS

NwHacks (Python) **Feb 2016**
- Created a Python application that calculates how similar any 2 given songs are using their MIDI representation and lyrics.

SportsHack (Python, Django) **Nov 2015**
- Built a score predictor for Canadian Football League using a Random Forest Classifier.

Microsoft KINECT Hackathon (C#) **Nov 2014**
- Programmed an AI called JOKER with the ability to understand specific voice command and carry out the corresponding instructions using the Microsoft Kinect.

EDUCATION

University of British Columbia **Sep 2013 – current**
- Bachelor of Science in Computer Science
- ACM ICPC PacNW Regional Contest 2017 Division 2 Champion

Undergraduate Research Opportunities Conference, University of Waterloo **Oct 2015**
- Worked on a mini research project of protein identification in mass spectrometer data.

Vancouver Institute of Visual Analytics **Jun 2015 – Apr 2016**
- Visual Analytics 101: Tools, Techniques, and Theory
- VA102: Applications of Visual Analytics

Massive Open Online Courses (MOOCs)
- Neural Networks and Deep Learning by deeplearning.ai on Coursera
- CS344 Intro to Parallel Programming by NVIDIA on Udacity

AWARDS & ACHIEVEMENTS

Trek Excellence Scholarship **Jan 2017, 2018**
- Recipient for the 2016-18 academic session worth a monetary award of CAD 1000

CS Student Service Award **Sep 2015**

UBC Faculty of Science International Student Scholarship **Jan 2015**
- Recipient for the 2014-15 academic session worth a monetary award of CAD 5000.

Dean's Honor List **May 2014 – current**
- For the 2013-14, 2014-15, 2016-17 academic sessions.

VOLUNTEERING

Undergrad Rep, Program Experience Committee, CS Dept. **Sep 2014 – Dec 2016**
- Assisted faculty members in improving student experience in the CS Department.

Tech Trek Volunteer **Mar 2014 – Apr 2015**
- Assisted students from high school in learning Greenfoot (a derivative of Java).

SKILLS & INTERESTS

Writing	: Writing poems and short stories
Hobbies	: Learning new languages, playing soccer and playing the piano
Sports	: Cricket & Soccer. Competed as part of U16 and U19 school team.
Languages	: English, Hindi, Italian, French, Bengali, Punjabi, Urdu