Joymallya Chakraborty

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EDUCATION

Doctor of Philosophy in Computer Science (CGPA - 4.33) Expected: May '21
North Carolina State University (Advisor - Dr. Tim Menzies(tjmenzie@ncsu.edu))
B.E. in Computer Science (CGPA - 8.32) May '11 - June '15
Jadavpur University , India

EXPERIENCE

- Teaching Assistant , North Carolina State University August '17 – Now
Currently working as a Teaching Assistant in Artificial Intelligence, previously in C and Software Tools.
- Software Engineer Intern , Intel Corporation — Bellevue, WA May '18 – Aug '18
Worked as a member of "Tools and Runtimes (SSG)" team.
- Software Developer , TCG Digital — Kolkata, India July '15 – June '17
Worked as a member of core development team in two projects.

SKILLS

Programming Languages: C, C++, Java, Javascript, NodeJs, AngularJS, Jquery, Python, SQL,WSDL,XML
Technology: CUDA, Clang, LLVM, .NET framework, Play framework , Elastic Search , Spring MVC, Maven

INDUSTRIAL PROJECTS

GC Prototype : An experiment on .NET Core Garbage Collection May '18 – Aug '18(Intel Corp.)

- Explored optimization opportunities of .NET Core Garbage Collection and implemented PoC (Proof of Concept) prototypes. (C++, VTune, .NET framework).

MCUBE : A Business Intelligence software which has been designed to retrieve, analyze, transform and report business related data Dec '16 – Jun '17

- Worked as a front end developer integrating the front end part with the back end using Angular JS(Bootstrap, JQuery, Angular JS, Node JS , Require JS, C3 JS, D3 JS).

IFB Travel Systems : A project aimed at making a flight search engine July '15 – Dec '16

- Did the JAVA coding to create WSDL requests, responses and displayed the result in the html form using Angular JS (JAVA, Angular JS, JavaScript, Spring MVC, Apache Maven, jQuery, XML, WSDL, SQL).

ACADEMIC PROJECTS

Software Defect Prediction Model Using Socio-technical Network Aug '18 – Present

- Building a ML model to predict failures using developer interaction(Python).

Gender differences and bias in open source: pull request acceptance of women versus men Dec '17 – April '18

- Analyzed GitHub Pull Requests to find out the root causes of gender bias against women(Python,R).

Enabling Flexible Task Assignment On GPU Through SM Centric Program Transformations Sept '17 – Dec '17

- Developed a source to source translator that can perform SM centric program transformation with help of Clang's LibTooling, ASTMatcher , LoopRewriter (C++, CUDA, Clang, AST).

Diagnostic Evaluation using Linguistic Checkpoints For Machine Translation July '14 – July '15

- Used PoS taggers and word aligner to represent word alignment, KYOTO Annotation Format (KAF) to represent textual analysis. Later, Kybots were used to extract linguistic phenomena(GIZA++, TreeTagger, Kybot engine).

PUBLICATION

Algorithms for generating all possible spanning trees of a simple un-directed connected graph: an extensive review -*Complex & Intelligent Systems (Aug '18)- Chakraborty M, Chowdhury S,* **Chakraborty J**, *Mehera R, Pal R*