Joymallya Chakraborty

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EDUCATION

Doctor of Philosophy in Computer Science Expected: May 2022
North Carolina State University , Raleigh, NC
B.E. in Computer Science May 2011 - June 2015
Jadavpur University , India

RELEVANT COURSEWORK

North Carolina State University: Compiler Construction, Operating Systems Principles
Jadavpur University: Data Structures, Algorithms, Software Engineering, Object Oriented Programming

EXPERIENCE

North Carolina State University — Raleigh, NC
- ***Teaching Assistant*** August 2017 – Now

- Currently working as a Teaching Assistant in C and Software Tools.

TCG Digital — Kolkata, India
- ***Software Developer*** July 2015 – June 2017

- Worked as a member of core development team in two projects.

SKILLS

Programming Languages: C, C++, Java, Javascript, NodeJs, AngularJS, Jquery, SQL,WSDL,XML
Operating Systems: Linux/Unix system, Windows
Technology: CUDA, Clang, LLVM, Play framework , Elastic Search , Spring MVC, Apache Maven

ACADEMIC PROJECTS

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

- Developing a source to source translator that can perform SM centric program transformation with help of Clang's LibTooling, ASTMatcher , LoopRewriter .
- Technology Used – C++, CUDA, Clang, AST.

All Possible Spanning Tree Generation of a Simple, Symmetric, Undirected Graph Aug 2016 – July 2017

- Implemented C code version of twelve algorithms proposed by several researchers and compared those based on CPU time.
- A complete new algorithm of spanning tree generation has been constructed.
- Technology Used – C, JAVA.

Diagnostic Evaluation using Linguistic Checkpoints For Machine Translation (DELiC4MT) 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.
- Technology Used – GIZA++, TreeTagger, Kybot engine.

Secure Authorization System based on Finger Vein Identification May 2013 – Jun 2014

- Extracted ROI (Region of Interest) first from images, then used Intensity Normalization techniques. Later, Contrast Limited Histogram Equalization was done followed by Average Filtering.
- Technology Used – MATLAB.

INDUSTRIAL PROJECTS

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.
- Technology Used – 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.
- Technology Used – JAVA, Angular JS, JavaScript, Spring MVC, Apache Maven, jQuery, XML, WSDL, SQL.

REFERENCES

Dr. Xipeng Shen (North Carolina State University) - xshen5@ncsu.edu
Dr. Subhadip Basu (Jadavpur University) - subhadip@cse.jdvu.ac.in