

Website: <https://akashzcoder.github.io>

AKASH SINGH

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GitHub: [akashzcoder](https://github.com/akashzcoder) Academia: <https://mcgill.academia.edu/AkashSingh>

ACADEMIC QUALIFICATION

McGill University

September 2016 – April 2018

Master of Science: Computer Science

Inderprastha Engineering College

August 2010 – May 2014

Bachelor of Technology: Computer Science and Engineering

TECHNICAL SKILLS

- Programming Language: Java, C, Python, R, MATLAB, JavaScript, MongoDB, NoSQL, SQL, Aspect-oriented programming (CORE, RAM models), Tableau
- Web technologies: J2EE (Hibernate framework), Angular4, Bootstrap framework, NodeJS,
- Knowledge Domain: Insurance and Health care

WORK EXPERIENCE

McGill University, Montreal (January 2017 – till date)

Designation: Graduate Research Assistant

Technology used: Python, Angular4, NodeJS, Firebase, Python and POSTMAN

Domain: Human-Computer Interaction, Machine learning, web services, and RESTful API development

Projects: Phylo, Open-Phylo

Cognizant Technology Solutions, Chennai (June 2014 – July 2016)

Designation: Programmer Analyst

Technology used: Java, Web Services and APIs

Domain: Insurance and Health Care

Tools created:

Variable xTractor: extract insurance terms (variables) from Calligo script requirement documents using pattern recognition algorithms

xDashboard: thick client application built using web-services for safer batch transactions

QCidRoaster: To track all the Change Requests (CRs) for managing production defects.

XMLvalidator: For upstream XML validation

FELLOWSHIP AND SCHOLARSHIP

STP- Waldispuhl - CIHR

ACADEMIC PROJECTS

Title: Galaxy Community-OpenPhylo (July 2017 – till date)

Open-Phylo is a freely accessible crowd-computing platform that enables any scientist to enter our system and use crowds of gamers to assist computer programs in solving one of the most fundamental problems in genomics: the multiple sequence alignment problem.

Title: Phylo- Mobile Application (January 2017 – June 2017)

Phylo is a citizen-science game that helps in solving the problem of Multiple Sequence Alignment (MSA). We use machine learning to identify sections of MSA having scope of enhancement and also its difficulty.

Title: Reverse Engineering of WSO2 IoTServer (September 2016 – December 2016) [McGill University]

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The study employs the classic reverse-engineering process to gain an architectural overview of the WSO2 IoTServer. We begin by analyzing the static components of the project and expand towards the dynamic behavior of the system. We identify the most salient architectural decisions of the system and critically analyze its components. It serves imparting valuable & important knowledge with respect to (software) systems for IoT, to its greater audience.

Title: Aggregation of MSA (September 2016 – December 2016) [McGill University]

Title: Reverse Engineering Hibernate framework (September 2016 – December 2016) [McGill University]
Hibernate ORM source code was reverse engineered to create a Concern oriented reusable (CORE) file by weaving Reusable Aspect Models (RAM). Use this CORE file to generate the source code from sequence diagrams. Sequence diagrams should be drawn in UML2.0 format.

Title: Training and Placement Portal of IPEC (August 2012 – March 2013) [IPEC]

Developed features of the Training and Placement module as per the design document, its interaction with other modules and its integration with other automations already deployed in college. My major contribution in the development of server-side coding for this portal using the J2EE (MVC3 architecture and Hibernate ORM framework). Stack used: JSP, Servlets, Net Beans as IDE and MySQL for database.

CONFERENCE PAPERS

1. **AAAI:** Lessons from an online massive genomics computer game (accepted) – yet to be published
2. **HCOMP (WIP paper):** A Human-Computation Platform for Multi-Scale Genome Analysis (accepted) – yet to be published
3. **IEEE:** Debit/ATM card security based on chaos function and QR code (April 2014)

JOURNAL PAPER

1. **IJEDR:** Chaos based Cryptosystem (June 2014)

INTERSHIPS/TRAINING

Cognizant Technology Solutions, Chennai (June 2014 – August 2014)

- Issue and Complaint Management System
- Sopra India Pvt. Ltd., Delhi (August 2012 – March 2013)**
 - A team of top 6 students from IPEC and new recruits from Sopra India Pvt. Ltd collaborating in the same project: Student Information Management System (SIMS) going through different phases of Agile model.
- Sahara Q – shop, Mumbai (June 2013 – July 2013)**
 - Created Transaction codes (T-codes) using SAP ABAP for SAP SD team required in data analysis of retail business.

CERTIFICATIONS

- Udemy certified in Machine Learning (September 2016 – March 2017) and NodeJS (January – April 2017)
- Level 1 ethical hacking certified, November 2012.
- Secured an ‘A’ in Advanced Java Diploma at Pacific Networks, Mumbai in July, 2012.
- Cognizant Certified Professional in C and MySQL, September 2014.
- Cognizant Certified Professional in xPression suite, November 2015.

AWARDS AND ACHIEVEMENTS

Scholastic Achievements

- Digital Superstar of Cognizant in 2015.
- Gold Award in Project Management Strategy organized in Cognizant, December 2014.
- Highest Scorer from IPEC in ACM-ICPC, September 2012.
- Branch topper in B.Tech of IPEC in B-Tech first year, July 2010 - June 2011.
- Highest AMCAT scores in IPEC, (National Percentiles) [id: 10019851223103] with an average percentile of 98, January 2014.

EXTRACURRICULAR ACTIVITIES

- Lead blogger in Cognizant Academy, June - August 2014.
- Team Lead in organizing the event “Blind Coding” for ACM Tech-Sennight, September 2013.
- Member of the Association for Computing Machinery (ACM), August 2012 - July 2013.