

Harpreet Singh

SOFTWARE DEVELOPER

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Summary

Recently graduated from Trinity College Dublin with an M.Sc. in Computer Science at the top of my class. I have acquired knowledge and experience of programming Web and mobile applications during the course of my higher studies with a demonstrated capability of working in a team to deliver high quality software. I want to employ my skill set in a Software Engineering role to further my knowledge and expertise.

Education

Trinity College Dublin

Dublin, Ireland

M.SC. COMPUTER SCIENCE, NETWORKS AND DISTRIBUTED SYSTEMS

Sep. 2015 - Sep. 2016

- Taught Modules Grade: I, First class Honours (73%)
- Final Result Available in October 2016

University of Delhi

New Delhi, India

B.SC. PHYSICAL SCIENCES

July 2012 - June 2015

- Grade: I, First class Honours (75%)

Research

Postgraduate Research Dissertation, Trinity College Dublin

Dublin, Ireland

PROACTIVE CONFIGURATION OF DATA CENTRE NETWORKS FOR BIG DATA PROCESSING

Apr. 2016 - Sep. 2016

- The Research was aimed at optimizing data centre networks for Big Data processing applications, specifically Hadoop, in Proactive manner using Software-Defined Networking.
- Proactive flow scheduling was evaluated on the basis of the network throughput achieved and job completion times of **Hadoop** jobs running in a **16 host cluster** emulation.
- Development was done using **Python**, while **Git** was used for source control. **Mininet** network emulator was used for emulating the cluster and the POX controller was used for developing the Proactive flow scheduler.

Projects

Software Engineering Group Project, Trinity College Dublin

Dublin, Ireland

ZOOOP - WEB AND ANDROID APPLICATION

Dec. 2015 - Mar. 2016

- Zooop was a finalist at the **Citibank upStart Programme 2016**. It is a platform that let's food vendors push real time advertisements to an Android application from a Web portal.
- Developed a Web Application and an Android Application using **Test-Driven Development** and **Agile Methodologies** in a group of four developers.
- Web application was developed using **AngularJS**, **MongoDB** and **Node.JS**, while the mobile application was developed for **Android** using **Java**.

Networked Applications Project, Trinity College Dublin

Dublin, Ireland

ORGANISR - WEB APPLICATION

Jan. 2016 - Mar. 2016

- Organizr is a platform that enables instructors of amateur sports clubs to organize training sessions.
- Developed a *Web Application* using **Facebook Graph API**, **MongoDB**, **Node.JS** and **AngularJS** in a group of 5 developers, which was deployed on **Heroku**.

Individual Programming Project, Trinity College Dublin

Dublin, Ireland

PEER-TO-PEER DISTRIBUTED CHAT SERVER

Oct. 2015 - Dec. 2015

- Using **UDP Sockets**, developed a P2P Chat Server based on the *Pastry routing protocol*.
- Nodes in the network can broadcast messages with a hashtag, and retrieve all messages of a particular hashtag circulating in the Network.
- Development was done using **Ruby**, while **Git** was used for source control.

Undergraduate Final Project, University of Delhi

New Delhi, India

OBSTRUCTION AVOIDING ARDUINO ROBOT

Jan. 2015 - Apr. 2015

- Designed an autonomous robot using the **Arduino Microcontroller** which avoided obstructions in its path by using an Ultra-Sonic sensor.
- The Robot was programmed using **C**.

Skills

Programming	Python, Ruby, Java, Node.JS, C/C++, LaTeX
Web	Express with Node.JS, AngularJS, MongoDB, HTML5, CSS
Tools	Git, Vim, Linux, Mininet
Languages	English, Hindi, Punjabi

Extracurricular Activities

Dublin University Rifle Club

Dublin, Ireland

ACTIVE MEMBER

Sept. 2015 - PRESENT

- Member of the squad for 0.22 small bore rifle.

'Ankur' Theatre Society, University of Delhi

New Delhi, India

ASSISTANT DIRECTOR OF A STREET PLAY

July 2012 - March 2014

- Responsible for managing and creatively driving a cast and crew of 20 people of a street play production of which was critically appreciated in the Delhi University Theatre Circuit and won numerous competitions.

Awards

INTERNATIONAL

- | | | |
|------|---|----------------|
| 2010 | 3rd Position , "Quanta, the annual International Competition in Science"-Designed a model motor boat that was made to race among-st other competitors in a swimming pool, with schools from 16 different countries participating. | Lucknow, India |
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DOMESTIC

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| 2011 | Michelle's Cup , Awarded for being the best all-rounder student of St. Jude's School. | Dehradun, India |
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References

Dr. Stefan Weber

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