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
M.Sc. Computer Science, Networks and Distributed Systems

Dublin, Ireland
Sep. 2015 - Sep. 2016

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

University of Delhi
B.Sc. Physical Sciences

New Delhi, India
July 2012 - June 2015

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

Research

Postgraduate Research Dissertation, Trinity College Dublin
Proactive Configuration of Data Centre Networks for Big Data Processing

Dublin, Ireland
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
Zooop - Web and Android Application

Dublin, Ireland
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
Organisr - Web Application

Dublin, Ireland
Jan. 2016 - Mar. 2016

- Organisr 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*

DOMESTIC

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

References

Dr. Stefan Weber
032 Lloyd Institute
Trinity College Dublin
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