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# Saramsha Dotel

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## EXECUTIVE SUMMARY

Computer Engineering undergrad with an avid interest and experience in AI/ML, Full-stack web development and a good aptitude for mathematics and programming.

## SKILLS

- Programming and Application Development using C/C++/Python.
- Server-side Web Development using Django framework as well as NodeJS.
- Front End Web Development using HTML/CSS/JavaScript and ReactJS.
- Applying AI (ML and DL) techniques for data-driven applications with experience In using libraries like PyTorch, sklearn, numpy, pandas, OpenCV.
- Database design and management using SQL.
- Graphics Designing using Adobe Photoshop and Adobe Illustrator.
- Version Control using Git and Containerized Development using Docker.

## EDUCATION

**Institute of Engineering, Pulchowk Campus**— *Bachelors in Computer Engineering*

December 2015 - September 2019 | Aggregate Examination Score: **85.3%**

**St. Xavier's College, Maitighar** — *High School (+2 Science)*

July 2013 - June 2015 | Board Examination Score: **85.1%**

**Graded English Medium School, Dhapakhel** — *School*

May 2005 - March 2013 | Board Examination Score: **90.3%**

## AWARDS AND ACHIEVEMENTS

### Smart Urban Technology Challenge 2018 (Category Winner)

Member of the team that developed an AI based traffic mobility analytics platform that was selected as the winner of the category "Urban Infrastructure" amongst 150+ teams in the nationwide competition organized by Kathmandu Metropolitan City and supported by the government of Nepal.

### Ncell Academic Excellence Award (Years 2016 and 2017)

Recipient of the Ncell Academic Excellence Award for the years 2016 and 2017 which is awarded to the student securing the highest aggregate marks in Computer Engineering in Pulchowk Campus for the given

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academic calendar year.

### **Hult Prize at TU 2017 (Winner) and Hult Prize Dubai Regionals (Participant)**

Member of the team that won the Hult Prize at Tribhuvan University and participated in the Hult Prize Regional Finals in Dubai, UAE in 2017. The Hult Prize is the biggest social entrepreneurship competition for students all around the world.

### **LOCUS Hack-a-week 2018 (Winner)**

Member of the team that won the annual Hack-a-week competition of LOCUS in the year 2018, which is a week long application development hackathon competition.

## **PROJECTS**

### **Disaster Impact Assessment from Satellite Imagery — Undergraduate Major Project**

A Deep Learning and Computer Vision based research project to identify the areas affected due to disaster in satellite imagery by analysing the changes in topographical features like roads and buildings through techniques like semantic segmentation and image processing. The project was supported by University Grant Commission under a Collaborative Research Grant.

Technology Stack: **Python (PyTorch, OpenCV), NodeJS (Express), HTML/CSS/JS, ReactJS, Docker**

### **Traffic Mobility Analytics Platform — Undergraduate Minor Project**

A Computer Vision based software to classify and count the total number of vehicles in the road and estimate the road occupancy with client-server based monitoring service. It employs YOLO CNN trained through transfer learning on self-constructed dataset of Nepali vehicles.

Technology Stack: **Python (Django, OpenCV, Darkflow), HTML/CSS/JS, Socket Programming (Channels)**

### **University Portal — LOCUS 2018 Hack-a-week**

A full-fledged classroom management web portal developed as part of course project of Software Engineering which also won the LOCUS 2018 Hack-a-week on health and education category.

Technology Stack: **Python (Django), HTML/CSS/JS, MySQL**

### **Product With Story — Hult Prize 2017 and Seedstars Kathmandu 2017**

An e-commerce website prototype to sell the products of micro-entrepreneurs and provide a social platform to expose their skills and stories.

Technology Stack: **Python (Django), HTML/CSS/JS, MySQL**

### **Bhakundo — Undergraduate 3rd Semester Project**

A computer vision based game of air hockey, where you play by the motion of objects in your hand instead of using the mouse or controller.

Technology Stack: **C++ (Qt5, OpenCV)**

### **Thoplo the game — 1st Semester Project**

A 2D game developed using OpenGL and Win32 API in C Programming language.

Technology Stack: **C (OpenGL, Win32 API)**

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## WORK EXPERIENCE

### **Software Engineering Intern** — *LIS Nepal Pvt. Ltd.*

January 2019 - PRESENT

Worked on C++ to develop algorithms and prototype of a performance-focused component of the company's internal project and learned about best practices in code documentation and agile software development using tools like Asana in the process.

## EXPERIENCE

### **AI Fellow** — *Fusemachines AI Fellowship*

December 2017 - January 2019

Selected as an AI fellow for the Fusemachines AI Fellowship program which provides guidance and scholarship to complete the online courses on AI and ML offered by Columbia University.

### **Participant** — *First NAAMII Nepal Winter School in AI*

December 2018

Awarded with a scholarship to attend a 10 days intensive course on AI organized by NAAMII (NepAI Applied Mathematics and Informatics Institute for Research) and mentored by national and international AI researchers and practitioners.

### **Volunteer** — *3rd IEEE ICCCS 2018*

October 2018

Served as a volunteer in the 3rd IEEE International Conference on Computing, Communication and Security 2018 organized in IOE, Pulchowk Campus on October, 2018.

### **Student Coordinator** — *Big Data Workshop*

June 2018

Coordinated the organization of a workshop on Big Data mentored by a foreign professional in Pulchowk Campus as an IEEE Nepal Subsection event in association with IIT Delhi.

### **Vice President** — *The SET Council, St.Xavier's College*

May 2014 - May 2015

Took the role of Vice President of the student lead organization of St.Xavier's College, Nepal that focused on all-round personality development in students by organizing seminars, workshops, exhibitions and social campaigns.

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## REFERENCE

### **Dr. Arun Kumar Timalisina**

Lecturer, Department of Electronics and Computer Engineering, IOE, Pulchowk Campus

Director, IEEE Nepal Subsection

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### **Dr. Aman Shakya**

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