

Nishant Arora

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I intend to pursue applied research in the fields related to Machine Learning, Computer Vision (Object Modelling and Recognition) and Human Computer Interaction. I am searching for opportunities that have a potential on global scale.

<https://nishantarora.in>
<https://github.com/whizzzkid>
<https://lnkd.in/whizzzkid>

EDUCATION

M.Sc. in Applied Computing - University Of Toronto.

September 2016 — December 2017

I am pursuing the following courses:

- Introduction to Machine Learning.
- Creative Applications for Mobile Devices
- Communication for Computer Scientists
- Human-Computer Interaction
- Advanced Mobile User Interfaces
- Deep Learning in Computer Vision

Awards:

- Addictive Mobility Scholarship 2016

B.Tech. in Computer Sciences and Engineering - Maharshi Dayanand University.

August 2008 — May 2012

My favourite courses were:

- Data Structures and Algorithms
- Web Development
- Intelligent Systems
- Digital Electronics
- Digital and Analog Communications
- Compiler Design

WORK EXPERIENCE AND PROJECTS

Nureva Inc., Calgary, Alberta, Canada

May 2017 — December 2017

Computer Vision Research Intern - I will be working under the supervision of *Mr. David Popovich*, *Principal Imagineer*, *Nureva Inc.*) and *Prof. Sanja Fidler* (*University of Toronto*) researching on various real-time camera switching techniques based on context.

University of Toronto, Toronto, Ontario, Canada.

September 2016 — April 2016

Teaching Assistant - Working under *Prof. Karen Reid* and *Prof. Amir Chinai* on *CSC309 - Programming on The Web* course.

- **Lab/Assignment Designing, Testing and automation:**
 - I make sure everything is according to latest industry standards and relevant.
 - Help students get insights during lab hours.

Skills Used: Python, Bash, Node, GitHub, JS.

Google, Gurgaon, Haryana, India.

August 6, 2012 — August 5, 2016

Software Engineering Consultant— gTech engineering. I took on multiple roles:

- **Tools Specialist - gTech Engineering Devshop** *Jan 2015 — Aug 2016*
 - Managed and maintained two internal business intelligence tools used by the AdSales Team.

Skills Used: Python, AngularJS, Backbone.js, Blaze Build system, Google AppEngine.
- **Crawling Specialist (SME) - Gmail Intelligence - Google Now** *July 2014 — December 2014*
 - Built an intelligent parser backend which provides vital actionable information from gmail data for multiple google projects like google now, gmail cards, etc.

Skills Used: Crawzall (Internal Crawling Infrastructure), JS, Python.

- **Deep Link Crawling Specialist - Flight Data Quality**

August 2013 - June 2014

- Worked as a lone dev in India with the Zurich eng team.
- Helped built a JS/Webkit based deep-link crawling mechanism to track airline price changes to verify price data quality.

Skills Used: JS, C++, Crawzall (internal Crawling Infrastructure).

- **Real Time Resource Analytics and Reporting**

August 2012 - July 2013

- Built a chrome extension based tracking tool for 3rd party contributors on the Freebase project.
- This tool tracked more than 450 contributors from all over the world, which recorded: user interactions, daily trends, productivity hours, performance metrics, attendance, etc.

Skills Used: PHP, JS, Chrome Extensions, MySQL, Apache, Google APIs.

DEVELOPMENT STACK

- Google AppEngine
- Python
- JavaScript/HTML (Front End technologies)
- Android/Java
- Numpy/Tensorflow (Machine Learning)

PERSONAL PROJECTS

- **Instagram Proxy API:** A full fledged CORS compliant ReST API for Instagram's public Data.

Skills Used: Node, Heroku.

- **Arduino Based Hexa-Rotor Helicopter:** Based on *Ardupilot Mega* platform, payloads capacity: 4kgs

- Involved my aeronautical engineer friend, to understand avionics.
- Controlled using telemetry device attached to an android phone.

Skills Used: Arduino, Complex Electronic Circuits, Avionics, Power Distribution, Android, Python.

- **Youtube on repeat - Chrome Extension:** Fan made extension for youtubeonrepeat.com

Skills Used: Javascript, Chrome.

- **Bing Wallpapers For Linux:** Bing's beautiful images of the day as linux wallpapers.

Skills Used: Linux, Build Tools, Bing API, Shell.

- **Langdetect.js:** Node package to detect programming languages.

Skills Used: NodeJS, Javascript.

- **PHP Image Resize:** Resize, compress and cache your images on the fly.

Skills Used: PHP, Imagick, Caching mechanisms.

UNDERGRAD PROJECTS

- **WiFi and Arduino Based Surveillance Robot:** based on recycled RC car platform.

- Soldered all circuits from scratch. Made all mounts and holders from recycled materials.
- Used a wifi router as a hotspot, Arduino chip with wifi shield as controller. IP Camera to provide video feed.
- Built a very high power H-Bridge motor driver using mechanical relays.
- Ideal for short range video surveillance in military and wildlife research.

Skills Used: Radio Transmission Techniques, Arduino programming and Hardware, Tools, MCU.

- **Scara Robot:** Robotic Writing Arm.

- Designed and Implemented a 2D Robotic arm to write using a marker attached to its hand.

Skills Used: Arduino programming and Knowledge about Hardware, Tools, Design and MCU.

- **Hexapod Bot and Line Follower Bot:** These two bots were made in workshops, earning a first prize, successfully executed all the stances of a Hexapod and functions of Line Follower and edge detector

Skills Used: Arduino programming and Knowledge about Hardware, Tools, Design and MCU.