# **Aishik Pyne**

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#### **EDUCATION**

#### **Jadavpur University**, Kolkata — Bachelor of Engineering

AUGUST 2015 - PRESENT

- Majoring in Computer Science with a CGPA of 8.4/10
- Courses Taken
  - o Basic C Programming
  - o OOP(C++ and Java)
  - o Data Structures and Algorithms
  - Graph Theory
  - Computer Organization, Computer Architecture, System programming
  - Operating Systems and Linux Shell
  - DBMS (Relational Model)
  - Networking
  - Compiler Design
- MOOC
  - Introduction to Computer Vision Udacity
  - Deep Learning (CS231n Stanford) Youtube
  - Reinforcement Learning (UCL-David Silver) Youtube

### **St.Xaviers Collegiate School,** Kolkata — High School

JULY 2003 - MAR 2015

- Class X (ICSE) 96% with a 100% in Computer Science
- Class XII(ISC) 96% with a 99% in Computer Science

### **Summer Training**, IIT Kharagpur — Student

MAY 2016

An introductory course on C++ and Data Structure and Algorithms

#### **PROJECTS**

#### **Soil map visualization**, Kolkata — *Developer*

JAN 2018

I laid my hands on some soil data of West Bengal which could be plotted on a map to see soil demographics of an area.

Toolchain used - Visualized data points on the map of west bengal, using leaflet.js. The backend had a RESTful API using NodeJS. The project was scalable due to dynamic AJAX calls.

#### **SKILLS**

Advanced Proficiency in **Python**, **C++,Java** 

Fairly Comfortable with libraries such as TensorFlow,OpenCV, C++STL and Web Development(HTML,CSS,jQuery, PHP, Nodejs, MySQL, MongoDB), MATLAB

Have worked with Azure Datafactory and setting up pipelines.

#### **ADDITIONAL INTERESTS**

Table Tennis, Hiking, Volleyball. Lawn Tennis

Special Interest in Wildlife **Photography** 

In next phase I plan to make a predictive model to suggest which crop to be grown at which geographical location based on it's present soil composition and irrigation level.

### 'Twenty-Nine' card game solver, Kolkata — Researcher

JAN 2018

Twenty-Nine is 4 player card game. I used a single Reinforcement learning network to replace on single player. Then the network played as one player at a time, eventually playing against itself until it learned some strategies of the game.

### **Visual Odometry using Deep Learning,** Kolkata — Researcher

OCT 2017 - PRESENT

During SLAM an important task is to perceive the environment and distinguish static(Trees, parked cars, lamp posts) and dynamic objects(Moving cars, trucks). Applying statistical features to classify such objects was a good effort but not satisfactory. Thus we plan to use Deep Learning to solve this problem

# Semantic Segmentation for Materials in Context(MINC) using Deep Learning, Kolkata — Developer

JUNE 2017 -JULY 2017

MINC- Materials in Context. This is a dataset featuring image patches of materials like metal, fauna, cotton, etc. We built a model to segment out materials from a picture using a GAN and CNN which acted like synthetic ground truth labels for the GAN. The CNN and the GAN gave an approximate overall 40% accuracy.

Due to resource and time constraints, this project halted.

## Unsupervised Learning of Architectural Scene Recognition , Kolkata — Junior Researcher

AUG 2017 -PRESENT

This is an ongoing collaborative project with my professor and a Ph.D. scholar of Architecture Department where I'm a junior researcher. The main aim is the cognitive understanding of architectural scenes using basic image processing and no machine learning methods to keep the model, data independent.

### Election System Development , Kolkata - Coder, Developer

SEPT 2016 - JAN 2017

Designed an online election system using basic HTML CSS at the front-end and JSP and MySQL at the back-end server side for hassle free elections for the student councils.

# **Microsoft IDC**, Hyderabad — Intern, Software Engineering Development

MAY-JULY 2018

 Worked on Artificial Intelligence and Remote Sensing in the field of agriculture

#### JU Journal, Kolkata — Co-Founder

APRIL 2016 - PRESENT

- Established a central mouth piece for the campus.
- Published journals containing Alumni, Professors and Students interviews, Opinion polls

#### Jantra Tantra (Tech Fest at JU), Kolkata

JAN 2016

- Build a smoke detecting robot using Arduino as the microcontroller.
- It could be controlled using bluetooth from a smart phone and could also be run in auto-mode.
- Obstacle detection was done by IR sensors. It was allowed to move in free space and assuming it would go on for infinite time it would cover the whole area.

# **Website Development for JU Photography Club,** Kolkata — *Coder, Developer*

SEPT 2016 - OCT 2016

- Designed a website for my Photographic Club(www.juphotofest.com)
- Front End was managed by a CMS
- Back End was created from scratch using HTML, CSS and PHP
- It included functionalities like accepting online payments through a payment gateway, sending auto-generated mails to participants of the exhibition and keeping the record in MySQL