Sourav Kulkarni

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EXPERIENCE

Barclays, Pune — *Graduate Analyst(BA3)*

July 2019 - April 2020

Software Developer in Wholesale Credit Risk department

Indian Meteorological Department, Pune — *Project Intern*

September 2018 - May-2019

Project intern under the guidance of Dr. A. K. Srivastava.

Rajiv Gandhi National Park, Pune — *Volunteer*

APRIL 2017 - SEPTEMBER 2017

Volunteer work with tasks ranging from park cleanliness, .

Institute of Natural History Education and Research(INHER), Pune — *Volunteer*

SEPTEMBER 2017 - PRESENT

As a member of INHER I help in spreading environmental awareness about nature and its conservation. As a volunteer, my responsibilities include helping in organizing various educational lectures throughout the year, helping real scientists with their research, etc.

EDUCATION

Pune Institute of Computer Technology, Pune— *BE*

CGPA : 7.9

June 2015 - JUNE 2019

Ashok Vidyalaya Junior College, Pune — *12th HSC(Maharashtra State Board)*

Secured 80% in 12th HSC Board with 134 in JEE Mains.

JUNE 2013 - APRIL 2015

Abhinav Vidyalaya Primary School, Pune — *SSC(Maharashtra State Board)*

Secured 93% in 10th SSC Board

SKILLS

Beginner : C, Neural Networks, Android, BO

Intermediate : Computer Vision, Web Development, MySQL, NOSQL, C++, Arduino, MS Office, Adobe Photoshop

Advanced : JavaScript, Java, Python, Genetic Algorithms, Image Processing, Physics based Simulations and working with Physics Engines

AWARDS AND CERTIFICATES

Passed with Distinction : Course in Basic Ornithology

First Class with Distinction : Trinity College London Piano Exam Level 2

First Class with Distinction : Gandharva Mahavidyalaya Harmonium Exam Stage 2

School Topper : Won an award for being the 'Subject Topper' in school for Science Subject

LANGUAGES

English, Marathi, Hindi, German(A2)

PROJECTS AND PUBLICATIONS :

- **Food Quality Inspection using Computer Vision** - *BE Project*

Identification of packaging faults and impurities in given product. This project was sponsored by Prescient Technologies, Pune in partnership with Uurja Dairy for their dairy products.

- **Introduction to Genetic Algorithms** - *TE Seminar*

Worked on various simulations and programmes providing an introduction and showcasing the use of genetic algorithms and evolutionary computing. Gave a 20-minute talk on the same.

- **Exercise Bike video game**

Developed a simple rig using Arduino Uno that enabled the interfacing of a simple stationary exercise bike to a computer which was running a simple java based game I made. The exercise bike acted as an input and the game progressed depending on the amount of pedalling and the speed.

- **Theremin**

Created a virtual musical instrument that used OpenCV and PS3 Eye Camera and PS3 MoveController to play musical notes based on user's hand gestures.

- **Self Driving Car Simulation**

A simple JS based simulation of Self Driving Cars using Genetic Algorithms and Neural Networks.

- **Word Game Problems Generator**

Automatically generates a grid of jumbled letters that acts as a problem statement for a word game where the player has to find the given words in the grid. Originally aimed at primary schools as a teaching aid for languages this project works in a browser with the help of JS and JSON thus eliminating the need of installing special software.

- **Automatic Pet Feeder** - *TE IOT Mini-Project*

Simplifies the task of feeding your pets by automatically dispensing predetermined quantity of pet food based on time of day or manual remote trigger from user smartphone

- **Olympian Exercise Helper App** - *TE SDL Mini-Project*

An app which acts as an exercise aid to the user by providing facilities such as tracking jogging distance, calories, time, pace, etc. Also has other built in exercises and workouts that the user can refer to.

PUBLICATIONS

Removal of Unwanted Objects from Images using Statistics(ISSN: 0976-9102).

A novel approach to removing unwanted objects from an input image set. Paper published in IJIVP free and open access international journal. Entire code available on GitHub.

An Automated Computer Vision Based System for Bottle Cap Fitting Inspection(ISSN: 2572-6129).

Identification of packaging defects in bottled products with computer vision techniques and their comparative analysis. Paper published in 2019 Twelfth International Conference on Contemporary Computing (IC3), IEEE.