

UJJWEL BALWAL

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EDUCATION

Sri Sivasubramaniya Nadar College of Engineering

Undergraduate Student

Department of Computer Science and Engineering

Member of Competitive Coding Community

Member of Android App Dev Community

July 2017 - Present

Overall GPA: 8.2/10

TECHNICAL STRENGTHS

Computer Languages

C/C++, Python, Java, SQL, MATLAB

Software & Tools

MySQL, OpenCV, Git, Android Studio, IBM Cloud, LaTeX

EXPERIENCE

Developer - "Intranet Revaluation System"

August 2019 - Present

Controller of Examinations, SSN Institutions

- Leading a team of programmers on the development of in-house revaluation application and tracking system
- The system allows the students of SSN Institutions to apply for revaluation of individual subjects through an online portal in the organization's intranet

Internal Funded Project - Forest Fire detection using Drones August 2018 - August 2019

SSN College of Engineering

- Worked on an internally funded project that aims to create a prototype drone capable of autonomously monitoring a forest area for fires and raise an alarm in case of one, resulting in early mitigation and minimal damage
- Hardware phase: Created a cost-efficient prototype drone, capable of capturing live feed of forest area and relaying it back to the ground station.
- Software phase: Created an Image Processing Algorithm using Open Source Libraries Tools and Libraries to analyze the Live feed from the drone camera, monitor and detect forest fires in real time.

RESEARCH ACTIVITIES AND PUBLICATIONS

Research paper - Bot Assisted Software Development

January 2019 - March 2019

Published in "International Journal of Innovative Technology and Exploring Engineering (IJITEE)"
[Scopus indexed], ISSN: 2278-3075, Volume-8 Issue 6-S, April 2019

- Conceptualized a system to structure and catalog program code snippets, such that a bot could read that catalog, understand the working and behaviour of a code block, and fetch it when the programmer needs related or same functionality.
- The system aims to increase the speed and productivity of programmers in early stages of developing a new project.

Paper Presentation - Fossil Fuel Emission Prediction System

September 2019

International Conference on Recent Trends in Clean Technologies for Sustainable Environment (CTSE-2019)

- Predicted the CO₂ emission in the near future in various countries based upon the Fossil-Fuel CO₂ Emissions.
- Used various Machine Learning Techniques on the CDIAC dataset, Oak Ridge National Laboratory.

Paper Presentation - Forest Fire Detection using Image Processing September 2019
International Conference on Recent Trends in Clean Technologies for Sustainable Environment (CTSE-2019)

- Presented the methodology results and findings for building the drone & algorithm for real time fire detection, based on my internally funded project.

ACADEMIC ACHIEVEMENTS

Secured **Best Paper Award** for “Bot Assisted Software Development” in International Conference on Advanced Research in Engineering Science & Management (ICARESM) 2019.

Ranked 42; corresponding to top 0.5% in the merit list, consisting 10,000 candidates of State level Engineering competitive Exam (JKCET).

Merit cum profile-based scholarship for Bachelors Degree (2017 - 2021) from AICTE, Government of India.

RELEVANT COURSES

Core Courses

Software Engineering
Algorithm Design and Analysis
Database Management Systems
Operating Systems
Data Structures
Object Oriented Design and Analysis

Online Courses

Algorithm Design and Analysis — Penn
Machine Learning — Stanford
Data Science Methodology — IBM

POSITION OF RESPONSIBILITY

Organizer

Invente 2k19

September 2019

Sri Sivasubramaniya Nadar College of Engineering

- Organized technical event Techathlon, one of the flagship technical coding event in Invente 2k19, our college's national level tech fest.
- Problem setter of Algorithms and Data Structures Track for the first round of the event.

Education Volunteer

DefExpo 2018

April 2018

Department of Defence Production

- Volunteered in DefExpo India 2018, the tenth in the series of biennial Land, Naval and Internal Homeland Security Systems Exhibition, including 232 foreign companies from 32 countries in the show along with 15 country pavilions.
- Worked as the Single Point of Contact in the American Pavilion and coordinated volunteer operations in Live Demonstration Area during the visit of delegations and VIPs.

School Captain

School Pupil Leader

April 2016 - March 2017

Kendriya Vidyalaya No. 1 Udhampur

- Served as the School Captain of KV No. 1 Udhampur, one of the oldest school in India and the biggest school in the KVS Jammu region, consisting more than 2500 students.

HONORS AND ACHIEVEMENTS

Runner-up of Big Data Analytics Workshop (2018) case study, organized by ACM college chapter, SSN College of Engineering.

Certificate of Honor — National winner of Gurutsav (2014) — Ministry of Human Resource Development, Government of India

Certificate of Appreciation — Represented Jammu region in National Childrens Science Congress (NCSC) finals (2013) — Department of Science and Technology, Government of India