Shubham Subhankar Sharma (Software Developer)

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Portfolio : https://shubhamshubhankar.github.io

Github : github.com/shubhamshubhankar

LinkedIn : linkedin.com/shubhamshubhankar

Address : Pavia, Italy

Languages: Hindi (Native)
English (Toefl Ibt - C1)
Italian (Beginner)

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Summary

I am a result-oriented problem solver specialising in effective and scalable business solutions. With a passion for Computer Vision, Cloud Computing, Software Development and Satellite Data Analysis. I possess a versatile skill set and a continuous learning attitude. My philosophy revolves around "doing meaningful work and building meaningful relationships." Currently working on my Master's Thesis on Drought Risk Assessment using Sentinel-2 Hyperspectral Data.

Education

Masters in Computer Engineering - University of Pavia (Sep 2022 - Cur)	CGPA - 103.9/110
B.Tech in Information Technology - IIIT Vadodara (Aug 2013 - Jun 2017)	CGPA - 8.31/10
12th Grade, Kendriya Vidyalaya NER, Bareilly, UP (Apr 2011 - Mar 2012)	Percentage - 91%
10th Grade, Kendriya Vidyalaya Lokra, Assam (Apr 2009 - Mar 2010)	CGPA - 9.8/10

Programming Languages

C++, Google Apps Script, Matlab, Python, C, HTML, CSS, JavaScript, Java, Bash

Technical Skills and Interests

OpenCV, SVN, Git, GCP, Cloud Functions, OOPS, AWS, S3, GDB, Latex, RestAPI, MySQL, Vim, Gimp, OOPS, Docker, MongoDB, numpy, Computer Vision, Image Processing, ML/AI, DBMS, Computer Networks, Data Visualization, Satellite Data Analysis, SLAM, Google Earth Engine, QGIS, SNAP, Jira, DataStudio,

Work Experience

Feb 2020 - Sep 2022 Software Development Engineer-2 at Vehant Technologies, Noida, India

- Worked on various modules of XRay Baggage Scanning System to add significant features, thread support for faster execution and buffer streaming system using Kafka. Refactored and optimised 40% of the code to increase the FPS of the system from 60 to 120.
- Co-designed and implemented Z Effective prediction(effective atomic number) for identifying various objects.
- Integrated various image processing units namely Pseudo Colour, adjustable contrast maps, edge operations.
- Introduced various image enhancing techniques like super resolution, anti-aliasing, noise reduction in order to visually identify and differentiate between materials.
- Contributed to Threat Identification system(TIP) for sharp objects, Gun detection and Explosive detection.
- Worked on Dual energy colour map creation to improve the colour scheme in order to differentiate between organic, inorganic and metallic objects.

Jul 2017 - Jan 2020   Cloud Solutions Engineer at Searce Inc, Bangalore, India

- Designed and implemented Cost-efficient, High-available, Fault Tolerant, Scalable and Distributed Systems on Cloud.
- Worked onsite for e-commerce companies to automate business processes for CX, HR, Finance, IT and Engineering department.
- Built Dynamic code analysis and Vulnerability detection tool by integrating Bitbucket, SonarQube and Jira using Python.
- Developed Role Review Access, Mail Merge Solutions, End-to-end Onboarding/Offboarding solution, Call Recording Management Tool, Bulk User Creation/Deletion and Admin Console Management tool by leveraging Google Apps Script, JavaScript, HTML and Python.
- Built multi-class document classification tool for 2.5L docs using CNN in PyTorch and Vision API.

- Analysed and visualised 5TB of e-commerce data by using Apache Spark, MongoDB and Google Data Studio
- Implemented Google Cloud Search using Java to index and search in 10TB of ERP & Intranet data.

Jan 2017 - Jun 2017 Cloud Engineer (Intern) at Searce Inc, Pune, India
- Increased resource availability by 38% by using Tessel proximity sensors to monitor Meeting Rooms and ensured availability of resources using Google Calendar API.
- Built customised Real time-dashboards by fetching data from Google Analytics and Legacy Systems.
- Overhauled Internal Performance Dashboards for better management. This increased team efficiency by 35% MoM.
- Audit and User Usage Reports Integration with SIEM(Arcsight).

Jan 2016 - Nov 2016 UG Teaching Assistant (DBMS and OS) at IIIT Vadodara, Gandhinagar
- Conducted in-depth lab sessions and tutorials on OS topics like Multi-Threading, Process Scheduling Algorithms, Memory Management, Paging, Segmentation.
- Lead hands-on demos and tutorials on DBMS topics like MySQL, Normalisation, ER Model, Memcached, CAP Theorem, Concurrency Control, OLAP systems, Distributed Systems.

Personal Projects

Feb 2022 - Feb 2024	3D reconstruction of using UAV for Precision Agriculture from available dataset of Sorghum fields using Agisoft Metashape
Dec 2022 - Mar 2023	Fast Fourier Transform 2D with MPI using GCP
Nov 2022 - Feb 2023	Generalised Hough Transform for arbitrary shape finding.
Nov 2019 - Dec 2019	Motion Detection and Object Tracking for CCTV videos by extracting Contour Features in OpenCV.
Apr 2019 - June 2019	DumpTheGit searches through public repositories to find sensitive information uploaded to the Github repositories.
Apr 2019 - June 2019	AutoSource is an automated source code review framework integrated with SonarQube which is capable of performing static code analysis/reviews.
May 2016 - Jun 2016	Implemented Query Autocomplete using Trie data structure using Brute force and Heuristic based approach in C++.
Mar 2015 - May 2015	Java-based Text Indexing Application.
Jan 2015 - Feb 2015	Implementation for Canny Edge Detection and Harris Corner Detection.

Achievements

Feb 2024 - July 2024	Won the Grant from ASI and CONAE with Master's thesis on Drought Risk Assessment using Multispectral Sentinel 2 data.
Oct 2023 - Feb 2024	Dual First Prize in Group Project Samsung Innovation Campus blending AI and IoT with Samsung SmartThings and LoRa(VerdiTech - Smart Garden)
23 June 2019	1st Prize(Rs. 1 Lakh) at N/Core Hackathon organised by HackerEarth and Omidyar Networks. Built Awaaz(an IVR-based system that connects NGOs with farmers dealing with land encroachment issues).
Dec 2016	Won gold (Football) and Silver(Volleyball) medals at Inter-IIIT Meet, Kanchi.
Nov 2016	Organiser and co-conductor of Google Applied CS with Android
Feb 2015	MIT Media Lab - Design Innovation Workshop.
Apr 2011 - Mar 2012	Certification of Merit in English All India Senior School Certificate Exam.
2006, 2008	Represented Dehradun Region in U-14 Table Tennis National at KVS Meet.

Position of Responsibility

Aug 2013 - May 2017	Member of the Sports Committee, Programming Club, Mess Committee
Apr 2011 - Mar 2012	Served as Head boy in class 12th. Organised daily assembly, sports and cultural events for the year.