

Rahul Agarwal

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ABOUT ME

Explorer by passion and tech enthusiast by profession. I challenge myself with both new experiences and technology. I specialize in AI, Machine Learning, and Python, leading teams to create innovative solutions. Whether its traveling the world, developing AI-powered technologies, or pushing the limits, I'm always on the move **learning, growing, and inspiring** and I strive to inspire others to do the same. **My mission is to drive success through creativity, innovation, and continuous growth.**

EDUCATION

BE-Electronics and Communication Engineering 2020 – 2024
Sarvajanik College of Engineering and Technology(ECE Department NBA Accredited) Surat, Gujarat

- **Specialization/Minors:** Artificial Intelligence and Machine Learning (CGPA: 8.66)
- **Grade:** 8.29

Higher Secondary Schooling (PCM) 2018 – 2020
C.S. Vidya Bharati English Medium School Surat, Gujarat

- **Percentage:** 66.00%

EXPERIENCE

Avinya Digital Innovations 20th January 2024 – February 2025
AI | ML Enginner & Python developer Surat, Gujarat

Einfochips An Arrow Company: Summer Intern 27th July 2023 – 10th August 2023
ASIC Flow Orientation Ahmedabad, Gujarat

- Converted PicoRV32 microcontroller's file from **RTL to GDSII** using OpenLane
- Followed **ASIC flow** steps: synthesis, placement, routing, etc.
- Gained understanding of **input files** in ASIC design

PROJECTS

Apps Script & AppSheet Automations (Avinya Digital Innovations)
Task Automation, Invoice & Client Management, and App Creation

- **Developed automations** using Google Apps Script for tasks like email sending, WhatsApp/text messaging, and data management via Google Sheets
- Built a custom **AppSheet app** to automate invoice generation, track payment status, and manage client information
- Streamlined business operations by integrating automated workflows, reducing manual effort, and providing a user-friendly platform for task and client management
- Leveraged AppSheets no-code platform to create a seamless experience for managing invoices, payments, and client details in real-time

AI Web Scraper (Avinya Digital Innovations)
Web Scraping Tool

- **Developed a versatile web scraper** using Python, incorporating Crawl and Groq libraries for efficient data extraction
- Designed a **user-friendly interface** with Streamlit, allowing users to input custom prompts for flexible scraping
- Supports **multiple output formats**, enabling users to extract data based on specific requirements
- Enhances productivity by automating the web scraping process, enabling users to gather and process data with ease

Upwork Extensions

(Avinya Digital Innovations)

Job Search and Application Automation Tool

- **Created an extension and website** designed to provide users with instant job notifications on Upwork, enabling quick responses to newly posted jobs within 2-3 minutes
- Automates the entire application process, from **notifications to cover letters**, ensuring users can apply faster and increase their chances of selection
- Integrates **AI-powered personalized cover letters** and attaches media files relevant to each job post, tailored to the user's skills and job requirements
- Enhances the efficiency of job applications by streamlining notifications, custom responses, and media attachments to match job-specific criteria

Image Generation Tool

(Avinya Digital Innovations)

AI-Powered Image Generation

- **Developed an image generation tool** using Hugging Face's pre-trained models to generate images from text prompts
- Allows users to create **customized and unique images** based on creative descriptions, with a wide range of possibilities
- Despite **accuracy limitations**, the tool delivers high-quality, contextually relevant images based on user input
- Empowers users to visualize ideas by generating images that closely match their text prompts, providing flexibility for creative projects

ATS (Applicant Tracking System)

(Avinya Digital Innovations)

AI-Powered Resume Optimization

- **Developed an AI-powered system** that uses Optical Character Recognition (OCR) to read resumes in various formats, such as PDF
- Compares resumes with job descriptions and provides a **match percentage**, helping users assess their resume's relevance to specific job postings
- Highlights areas of improvement or missing information, offering actionable insights to enhance resume quality and increase job application success
- Streamlines the resume optimization process, allowing users to make informed adjustments to align their skills and experience with job requirements

AR Filters

(Avinya Digital Innovations)

Real-Time Augmented Reality Filters

- **Developed a real-time AR filter tool** using OpenCV and face recognition modules to apply filters (e.g., glasses, hats) to users' faces
- Uses **facial landmark detection** to accurately identify key facial features and apply dynamic filters in real time, enhancing user experience
- Inspired by popular platforms like Snapchat, this system allows users to personalize their appearance with fun and interactive filters
- Ensures seamless and responsive performance, providing an engaging augmented reality experience on various devices

CA Automation & .exe Tools

(Avinya Digital Innovations)

Income Tax Return (ITR) Download, Financial Report Generation, and Automation

- **Developed an automation suite** using PyAutoGUI and Docker to streamline tasks such as downloading Income Tax Return (ITR) files, generating financial reports, and assessing loan eligibility
- Automates data extraction and **financial report generation**, providing fast insights into an individual's financial standing and supporting informed decision-making for loan eligibility
- Created an automation tool for **WhatsApp** that sends messages automatically, improving communication efficiency for outreach and engagement
- Built a tool for **BNI websites** that extracts relevant data and stores it directly in Excel, simplifying data collection and analysis for business networking purposes

- Utilized **Docker** for testing, ensuring smooth deployment and scalability of automation tools across different environments
- Increases productivity by automating repetitive tasks, reducing manual effort, and ensuring accurate data handling and communication

Web Scraping Tool

(Avinya Digital Innovations)

Automated Data Extraction and Lead Generation

- **Developed a web scraping tool** that automates data extraction from a wide range of platforms, including Instagram, LinkedIn, Google Maps, refurbished phone platforms, and more
- Supports **automated message sending**, lead generation, and form filling, streamlining outreach and data collection across multiple sources
- Efficiently handles data from **various online sources**, including social media, search engines, and niche platforms, providing valuable insights for business operations
- Enhances productivity by automating tasks that would typically require manual input, saving time and improving data accuracy

Drone Delivery System

(SSIP Grant)

Research and Feasibility Study for Last-Mile Delivery

- **Conducted a research project** to explore the potential of drone delivery systems for last-mile logistics, analyzing the feasibility and challenges of using drones in real-world applications
- Evaluated the **pros and cons** of drone-based delivery, considering factors such as efficiency, cost-effectiveness, safety, and regulatory hurdles
- Although the prototype was not developed due to team separation, the research **established a solid foundation** for future development, providing a clear roadmap for subsequent implementation
- Provided valuable insights into the practicalities of integrating drones into supply chain operations, paving the way for future innovation in the logistics industry

Exercise pose recognition and counting sets

(MSP Cup 2022)

R-10(Asia-Pacific) level competition

- **The system was developed** using Python, incorporating angle calculations and the MediaPipe library
- The system offers **features** such as a timer, counter, exercise guidance, pose detection, and error detection

Life Expectancy Vehicular System

(DE Coursework)

System for sending alert when accident is detected, using GPS, GSM and Raspberry Pi

RC Car

(Robotics and Automation Mini Project)

Developed using LPC2148 as well as with Arduino UNO

Smart Stick for visually aided person

(EM Mini Project)

Developed using Arduino UNO and Ultrasonic Sensor

4Bit CPU

(VLSI Mini Project)

3-stage pipeline (Fetch, Decode and Execute) using Verilog

Heart Rate Monitoring System

(Embedded System Mini Project)

Developed using MSP430, ESP32, HW-827 Pulse Sensor

SKILLS

Machine Learning, Artificial Intelligence, GenAI, Object Detection, Image Processing, Computer Vision, YOLO, OCR, Django, Python, SQL, Apps Script & AppSheet

SKILLS SUMMARY

Languages and Tools : Artificial Intelligence. Python, Machine Learning, Computer Vision, GenAI SQL, Verilog, Vivado, MATLAB, AVR Studio, Proteus, LTSpice, Keil, Tinker CAD
Hardware : Raspberry Pi, FPGA, MSP430, LPC2148(ARM7), Arduino, ESP32/8266

ACHIEVEMENTS

Drone Delivery System SSIP Grant for SKYBOUND (1 Lakh) 2024
Startup Support and Innovation Program (SSIP), Government of Gujarat

Secured 1st Position at the Multimedia Signal Processing Cup 2022 6th August 2022
R-10(Asia-Pacific) level competition organized by IEEE SPS Gujarat Section

Secured 2nd Position at Digital Electronics Competition 29th November 2021
State Level Project Competition organized by IETE Surat Subcentre and ECE, SCET

Secured 2nd Position at Antenna Practices 2.0 26th April 2023
State Level Competition organized by SCET, Surat in association with IETE and MWTC

COMMUNITY INVOLVEMENT

Student Member Dec 2021 – Dec 2024
IETE Student Forum

Student Member Jan 2023 – Dec 2024
IEEE Signal Processing Society, SCET SB

Student Coordinator: Laser tech 29th Sept. 2023 – 30th Sept. 2023
SCET, Symposium TechFest with IEEE

PARTICIPATION

STEAM Robotics Masters Training 23rd Jan. 2023 – 4th Feb. 2023
TEERTH initiative by Knowledge Consortium of Gujarat 60 hours

100 Days of Code: The Complete Python Pro Bootcamp) 🐍
Online Course by Dr. Angela Yu on Udemy 52 hours

HOBBIES

- Traveling and Car & Bike Touring
- Table Tennis
- Learning New Things
- Exploring new places and experiences

LANGUAGES KNOWN

- English
- Hindi
- Gujarati

DECLARATION

I hereby declare that all information provided in this document is true and accurate to the best of my knowledge.