

Ansh Mittal

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Experience

Multidisciplinary Undergraduate Research Institute (MURI) | IUPUI, Indianapolis, IN

June 2023 – Present

Research Project: Personalized Preventive Care Recommendations

- Contributed to the development of a web application for personalized preventive care recommendations by making a Rest API which used Open AI's GPT 3.5 NLP model for extracting data from USPSTF guidelines and patient records.
- Created a python script to automate the deidentification of patient records to protect patient's personal identity. This helped in improving productivity of our team by saving multiple hours of manually deidentifying patient data.
- Responsible for database design, data loading using MongoDB.
- Involved in system integration of our API which extracts patient data with the web app's frontend.
- Conducted system evaluations to improve and compare performances of our methodologies using different Models like GPT 3.5 vs GPT 4.
- Documented tasks throughout the project in form of progress report, project report and presented my team's progress in weekly meetings.

UIITS- IUPUI | Indianapolis, IN

October 2022– June 2023

Computer Consultant

- Provided technical assistance to students, faculty, and staff on a variety of platforms including Windows, macOS, iOS, and Android, resulting in improved computing experiences and increased productivity.
- Demonstrated strong organizational and interpersonal skills, prioritizing tasks and managing time effectively to ensure timely and thorough assistance to clients.
- Responsible for accurately documenting, referencing and analyzing past customer-interactions data using ServiceNow.

Skills

Programming: C, C++, Python, Java, R, MATLAB, HTML, CSS, XML, JavaScript

Platforms: Azure, Linux (Ubuntu), MacOS, Windows,

Software: Android Studio, PyCharm, VS Code, NetBeans, R-Studio, OpenCV, GitHub, VIM, MS Office(Excel, PowerPoint and Word), Figma.

Professional Organizations: Google Developer's Group – Indianapolis & Delhi, Computer Science Club at IUPUI, Cybersecurity Club at IUPUI.

Languages: English (fluent), Hindi (native).

Soft skills: Quick-learner, presentations (large and small audiences), public speaking (speeches).

Projects

Classical Cryptography Autosolver

April 2023

Created a tool that will take a cipher, determine which of cryptographic algorithms were used for its encryption, then output the tests used for this determination and results are used to decrypt the cipher. In the end, the plaintext is returned for a sufficiently large message.

Tools used: Python 3.8

<https://github.com/AMX07/Cipher-Cracking>

Upper Body parts detection (without using any Neural Networks)

March 2023

Developed a Python-based video analysis tool to track head, hand, and shoulder movements for detecting various intensities of shoulder shrugs with real-time visual feedback.

Tools used: Python, Numpy, Meadiapipe and OpenCV Library.

<https://github.com/AMX07/Upper-body-detection>

Education

Purdue University | Indianapolis, IN

Fall 2022 – Present

Bachelor of Science in Computer Science, minor in Mathematics GPA 3.64.

Expected Graduation, December 2023

honored to have been recognized and included on the Dean's List since the fall semester of 2022.

Completing degree in 3 years.

Relevant Coursework

WebDev: Client-side: JQuery, APIs, HTML, JS, CSS, **Security in Computing:** Cryptography, HashCat, **Missing Semester** (MIT, Online/YouTube): Shell, Data wrangling, Git(version control) CS50(Harvardx/Online):C, Python, HTML, CSS, JavaScript, Flask, SQL

