

Dhruv Kapur

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Education

University of Michigan, College of Engineering, Ann Arbor, Michigan

Apr. 2026 (expected)

Bachelor of Science and Engineering in Computer Science

- GPA: 3.74/4.00, Dean's Honor List
- Notable Coursework: Data Structures and Algorithms, Introduction to Computer Security, Introduction to Computer Organization, Computational Linear Algebra, Discrete Mathematics, Introduction to Data Science

Experience

Knexus Research Corporation, Remote

May. 2023 - Aug. 2023

Intern

- Explored the behavior of data deidentification in the Collaborative Research Cycle NIST Program
- Evaluated outliers in the synthetic data in an archive of over 450 deidentified data samples produced by the NIST Diverse Community Excerpts Benchmark Data using Python libraries Pandas and Numpy
- Calculated bipartite graphs to analyze the differences between different synthetic data reports
- Collaborated with mentor and team to compile findings in a report for NeurIPS 2023 Track Datasets and Benchmarks

Computer Lab Maintenance, Gaborone, Botswana

Jan. 2019 - Aug. 2019

Assistant Technician

- Ensured optimal computer performance through system checks and troubleshooting
- Worked with a team to fix any existing computer problems related to software using a preprogrammed application installed on the computers

Projects

Machine Learning Text Classification, C++

Mar. 2023 - Apr. 2023

- Designed and implemented a C++ application for text classification with supervised machine learning techniques.
- Trained classifier on labeled datasets, extracted from large datasets of Piazza posts in CSV format, and calculated log-probability scores for accurate topic predictions
- Provided debugging options to display information about training data, classifier parameters, and prediction results
- Achieved accurate classification results on test data, contributing to development of text classification tool with an accuracy of 87%

Web-Based Office Hours Queue Management System, C++

Jan. 2023 - Mar. 2023

- Developed a web server for an office hours queue as part of a team project, implementing a REST API using dynamic memory management and linked lists, showcasing proficiency in container ADTs and data structures.
- Designed and implemented a doubly linked list data structure with an iterator interface in C++, ensuring memory leak-free code, backed up with Git version control
- Tested and debugged REST API, including error handling and response formatting, and integrated it into a real web server environment, gaining practical experience in web application development and server-client interaction.

Discord User Bot, Python

Mar. 2020 - Aug. 2020

- Developed Discord bot utilizing discord.py API to enhance communication and organization within gaming community
- Recorded commands in real-time sent by members and tracked their reactions to messages in specified channels
- Deployed bot on a virtual private server (VPS) to ensure uninterrupted, low-latency availability and secure data storage design
- Utilized by roughly 300 users on discord server streamlining event scheduling and gaming sessions

Interests and Skills

- **Languages:** Python, C/C++, Visual Basic, Julia, SQLite, JavaScript, CSS, HTML, Swift, React.js
- **Technical Skills:** Excel Office, Web Scraping, DBMS, Complexity Analysis, Algorithms, BeautifulSoup, Web Scraping
- **Online Courses:** Python For Everyone Specialization by University of Michigan
- **On-Campus Commitments:** Tau Epsilon Kappa (Technological Professional Fraternity), MHackers (Project-team based club - Machine Learning Team)