TAJVEER SINGH DHESI

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Personal Statement

Coming from the UK and completing my A-levels, I am a fourth year computer science and mathematics student on schedule to graduate in May 2025 from a Colgate University in the USA. Meanwhile, I am in search of different and new skills in which I can gather valuable experiences in a variety of tasks; equally, I believe that I have the confidence, enthusiasm and creativity to flourish in such a role.

Core Qualifications

- Teamwork
- Organization
- Attention to detail
- Problem Solving

- R, Python, Java, HTML, CSS, JavaScript, React.js, React Native, VB.NET, VBA, C
- Excel, Power BI and SQL/MySQL
- Data Analysis and visualization
- Windows PowerShell, Bash, Linux

Education

Bachelor of Arts: Computer Science and Mathematics Double Major   May 2025
Colgate University – Hamilton, New York, USA

A-levels: Further Maths (A*), Maths (A*), Computer Science (A*), Physics (A*), EPQ (A)   2019-2021
Durham Johnston Sixth Form– Durham, England

Work Experience

Director/Producer for Colgate Division 1 Athletics   Aug 2021-Present
Colgate University– Hamilton, NY
- Liaise with ESPN to dictate when media timeouts are taken and which ads to play during Colgate Division 1 Athletics and NCAA games.
- Enhances viewer experience using directing expertise by deciding which camera shows on broadcast and when, including liaising with replay assistant.

Curriculum Developer for Colgate Coders   Jan 2023-Present
Colgate University– Hamilton, NY
- Fostered community of over 100 computer science enthusiasts with events and activities for students to participate in.
- Helped build student's skill in computer science and enhance employability with educational presentations in computer science (Command line basics, Intro to HTML).
- Assisted 20+ students in preparation for a hackathon by hosting a workshop in HTML and CSS basics.

Laboratory Teaching Assistant   Aug 2023-Dec 2023
Colgate University– Hamilton, NY
- Assisted computer science laboratory instructor with helping students in building their understanding of key concepts and applying them in lab assignments.
- Strengthened my own and enhanced others' understanding of Java by assisting in two sections of Discrete Structures (COSC 290) and one section of Data Structures and Algorithms (COSC 202), both taught in Java.

Student Leader in the Dean of the College Division   Jan 2023-Dec 2023
Colgate University– Hamilton, NY
- The Link team of approximately 65-75, sophomores and upperclassmen help orient new students each Colgate year. Links help prepare students for individual success and make an important impression on the students they serve.

- Through small and large group experiences, educational programs, and social events, the Orientation Links increase new students' familiarity with student life, faculty and academic expectations and opportunities, campus resources, and the larger Hamilton community.

Full-Stack Developer – Sloop Software Group Aug 2023-Dec 2023
Colgate University– Hamilton, NY
- Provided Student led rideshare service with working app to handle customers and requests.
- Utilized JavaScript, React.js and React Native in VSCode to create the app with co-workers.
- Implemented real-time NoSQL cloud storage database with Cloud Firestore to store customer/ride data.

Research Experience

Research Assistant May 2023-Sep 2023
Colgate University– Hamilton, NY
- Generated runtime and accuracy data for an AI model to predict RNA base sequences from tertiary structure PDB files using Weights and Biases software, Python and Bash script.
- Used University servers and Python code to access and run AI on the node and feedback data to professor to implement in a published research paper.

Publications

- Tajveer S. Dhesi, Alyssa W. Bannister, Amirhossein Manzourolajdad
- "Deep Learning of Ligand-bound RNA Tertiary Structures Diverges from Learning Unbound Ones: A Case Study Using The gRNAde Software"
- https://doi.org/10.1101/2023.09.13.557627

Honors and Awards

Deans Award with Distinction for Academic Excellence Fall 2021-Fall 2023
Colgate University– Hamilton, NY
Highest award for academic achievement based on Grade Point Average each semester.

Alumni Memorial Scholar May 2021
Colgate University– Hamilton, NY
Access to $10,000 in funding for academic research of my choosing, Awarded to ~1% of applicants in class year, based on academic merit and student involvement.

Head Boy Mar 2020–May 2021
Durham Johnston Sixth Form– Durham, England
Selected as Head boy by Head teacher, Deputy Head Teacher, Head of Sixth Form and Deputy Head of Sixth form to act as student voice and represent student body in meetings and making of key decisions.

Certifications

- IACT 'Microsoft Excel' Certification (2022).
- Coursera 'From Excel to Power BI' Certificate (2024).
- Great Learning 'Intro to MySQL' Certificate (2024).

Relevant Classes Taken/Taking

Colgate University – Linear Algebra, Number Theory and Abstract Algebra, Real Analysis, Data Structures and Algorithms, Discrete Structures, Computer Systems, Differential Equations, Probability, Data Analysis, Combinatorial Problem Solving, Partial Differential Equations, Independent Research Project.

University of Wollongong – Data Mining and Knowledge Discovery, Modern Artificial Intelligence.

References

Available Upon Request