

KRISH BANSAL

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EDUCATION

Virginia Tech | Blacksburg, VA

Expected Graduation Dec 2026

Bachelor of Science, **Major** in Computer Science, **Minor** in Entrepreneurship - New Venture Growth (ENVG)

Cumulative GPA: 3.46 | **In Major GPA:** 3.85

PROJECTS EXPERIENCE

VT CRO| VEX U | C++, Pros, Git, GitHub

Sep 2024 – Present

- Engineered advanced autonomous and driver-controlled robotics systems using **C++** for high-performance results in VEX U competitions while collaborating with multidisciplinary team to implement innovative algorithms and optimize sensor-driven precision for competitive excellence

Real Estate Analyzer | VT Hacks | ReactJs, NodeJS, API integration

Oct 2024 – Nov 2024

- Engineered a predictive analytics tool for real estate pricing, leveraging **React JS** for a dynamic front-end, Microsoft Azure for advanced machine learning pipelines, and SQL for robust data management

Playlist Recommendation | Java

Feb 2024 – May 2024

- Engineered a personalized playlist recommendation system in **Java**, leveraging custom recommendation algorithms to deliver curated music suggestions that significantly enhance user experience and developed a recommendation logic that dynamically adapts to user preferences, optimizing user satisfaction

Inventory Management System | Java, SQL

Aug 2023 – Oct 2023

- Designed and implemented a comprehensive inventory management system for a candy store, enabling efficient tracking of stock levels, automating inventory updates, and generating real-time invoices, improved efficiency by **30%**.
- Developed architecture with well-defined classes to ensure seamless program execution, accompanied by a detailed Technical Design Document (**TDD**) outlining system requirements, functionality, and future scalability

EXPERIENCE

Peer Tutor | Knack | Blacksburg, VA

Jan 2025 – Present

Founder Pledge Class | Virginia Tech Kappa Theta Pi | Blacksburg, VA

Sep 2024 – Present

Mentor | UniRely | Remote

Sep 2024 – Present

- Guided high school students in crafting compelling essays for undergraduate applications and personalized mentorship, leveraging university-specific insights to enhance students' applications and improve their chances of securing admissions

Events Coordinator | Virginia Tech Bollywood Club | Blacksburg, VA

Aug 2023 – Apr 2024

- Strategically developed and executed innovative marketing campaigns, significantly boosting event and club visibility and maximizing attendance while planning, coordinating, and executing of dynamic social events for the club

Logistics Coordinator | Virginia Tech Indian Students Association | Blacksburg, VA

Aug 2023 – Nov 2023

Intern | Uber x Crimson | Remote

Oct 2022 – Dec 2022

- Conducted market research and designed **UI/UX mockups** for the "**Uber-Teens**" app prototype, using **Figma** to enhance user experience and ensure a market-driven approach and developed a strategic market plan for the prototype, applying research insights to identify opportunities and deliver a compelling presentation to Uber representatives and industry mentors

RESEARCH EXPERIENCE

Research Assistant | OpenDSA | Department of Computer Science, Virginia Tech

Jan 2025 – Present

- Collaborating with Dr. Cliff Shaffer and the team to enhance the OpenDSA platform, focusing on improving the instructor interface for better usability and integration with Canvas. Gaining expertise in **Ruby/Rails** and contributing to the optimization of a key **NSF**-sponsored educational technology used across universities

Research Assistant | Supercomputing in Small Spaces | Department of Computer Science, Virginia Tech

Feb 2025 – Present

- Contributing to cutting-edge research in **energy-efficient high-performance** computing (HPC) by optimizing low-power architectures, power-aware software solutions, and parallel computation using **C, C++, Linux, and Git**

Research Assistant | Emergency Stress in Crowds | University of Virginia and Virginia Tech

Oct 2024 – Dec 2024

- Managed complex data entry tasks and assist in synthesizing findings to contribute to advanced psychological and mathematical models of crowd behavior

Effect of Pivot Distance on Oscillation Period of a Meter Rule | Physics Internal Assessment (Unpublished)

May 2023

- Conducted an in-depth study on how varying pivoted distances affect the oscillation period of a meter rule, leveraging principles of rotational dynamics and developed and validated mathematical models

Moment of Inertia of Hollow Cylinders on Inclined Planes | Physics Extended Essay (Unpublished)

April 2023

- Investigated how the diameter of a hollow cylinder affects its speed on an inclined plane, using principles of rotational dynamics and moment of inertia

TECHNICAL SKILLS

Languages: Java, Python, C, C++, Assembly, JavaScript, MATLAB, HTML/CSS

Other: React.js, Node.js, MongoDB, VS Code, Pandas, Matplotlib, Seaborn, MySQL, Pros, Docker, Linux, SolidWorks, Atom, Eclipse, API Integration