Hargun Ghotra

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EDUCATION

Virginia Polytechnic Institute and State University   **Blacksburg, VA**

Bachelor of Science in Computer Science, Minor in Finance   *Graduation Date: May 2028*

- ***Relevant Coursework:*** *Data Structures & Algorithms, Object-Oriented Design (Java), Intro to Problem Solving in CS (Python, SQL, HTML, Linux), Fundamentals of Accounting*
- ***Skills:*** *Python, Java, OpenCV, React, Tailwind CSS, NumPy, pandas, APIs, GitHub, Prompt Engineering, SOLIDWORKS, MATLAB, Excel, Microsoft Office, Content Creation, Google Drive*

EXPERIENCE

Undergraduate Research Assistant (DBWorkout) | *Virginia Tech*   **Jan 2026 – Present**

- Optimizing an interactive SQL learning platform by refactoring frontend components to improve query visualization and accessibility for 200+ students.
- Executing structured usability testing of SQL exercises to identify system issues, document errors, and provide feedback on adaptive hint mechanisms using GitLab for version control.
- Analyzing learning analytics features to support instructor insights and evaluating components that enhance the SQL practice experience.

Marketing Data & Strategy Intern | *Oaklet*   **June 2025 – August 2025**

- Conducted keyword analysis and SEO optimization for company web assets, resulting in improved search visibility and organic traffic growth.
- Researched and compiled a prioritized list of relevant therapy and behavioral health conferences, including budget estimates for attendance, to inform go-to-market (GTM) strategy.
- Executed data-driven market research to identify high-value behavioral health conferences, compiling budget models to inform Go-to-Market (GTM) strategy.
- Contributed to free value content initiatives, including blog posts and interviews, to establish the company as a thought leader in the mental health space.

T-Tac Team Member | *e-NABLE @ VT*   **August 2024 – May 2025**

- Designed low-cost, personalized assistive devices for individuals with visual impairments through e-NABLE VT's T-TAC team, a student organization focused on 3D-printed accessibility solutions.
- Re-engineered an Xbox controller in SolidWorks, to make it simpler to use for an individual who had difficulty holding the standard controller.

PROJECTS

SpeakEasy AI Coach (VTHacks 13 Winner) | *Python, Flask, React, Gemini API*   **September 2025**

- Engineered a full-stack real-time public speaking assistant in 36 hours, integrating the multimodal Gemini API to process audio/video input with <500ms latency.
- Developed a Python/Flask backend to parse speech patterns and generate structured performance reports (transcripts, sentiment analysis, pacing scores).
- Built a dynamic React frontend that fetches context-aware YouTube tutorials based on AI-identified user weaknesses, creating a closed-loop learning system.

Financial Analytics Dashboard (CS2104) | *Python, pandas, Matplotlib, yfinance API, Streamlit*   **December 2025**

- Created a real-time market tracking application that aggregates live stock data from the yfinance API to visualize price action and volume trends for S&P 500 tickers.
- Implemented technical analysis algorithms in Python to calculate and plot Moving Averages (SMA/EMA) and RSI indicators, enabling users to identify momentum shifts.
- Engineered a sentiment analysis module that parses news headlines to quantify market sentiment, overlaying qualitative data onto quantitative price charts for deeper insight.

Intervue (HackViolet) | *React, Flask, Gemini API, ElevenLabs, OpenAI Whisper*   **February 2026**

- Developed a full-stack interactive interview simulator using React and Flask, designed to help students practice behavioral and technical questions with a realistic AI persona.
- Integrated Google Gemini 2.0 Flash to generate context-aware, persona-driven interview responses and OpenAI Whisper for real-time speech-to-text transcription with high accuracy.
- Implemented ElevenLabs API for low-latency text-to-speech synthesis.