

Dhruv Khera

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EDUCATION

Virginia Tech

Bachelor of Science in Computer Science, Minor in Cybersecurity
GPA: 3.61/4.00 (Dean's list in every semester, Major GPA: 3.82/4.00)

Blacksburg, VA
Aug 2024 – Dec 2027

EXPERIENCE

Undergraduate Research Assistant

Jan 2026 – Present

[DBWorkout - Full Stack SQL Learning Tool](#) ↗, Blacksburg, Virginia

- Built full-stack features in Python, React, and JavaScript for DBWorkout, an interactive SQL learning platform used in Virginia Tech CS courses, improved UI responsiveness and added new tools for students.
- Tested features and fixed bugs across the stack to get the platform production-ready for its rollout to 1,000+ students, TAs, and faculty across multiple CS courses; recognized in the [CAPWIC 2025](#) ↗ academic program.
- Deployed in live VT classrooms and evaluated through a 170-response study, where 90% rated it valuable for SQL learning and 87% reported high engagement; gave a presentation at the 2026 VTURCS Research Symposium.

Machine Learning Intern (Remote)

Nov 2025 – Jan 2026

IDS InfoTech LTD | [GitHub](#) ↗, Delhi, India

- Implemented CNN-based computer vision models in Python for image analysis and document layout classification, hitting 92% accuracy on a test set and cutting down the manual review work in IDS's publishing workflows.
- Built a Retrieval-Augmented Generation (RAG) pipeline that let internal teams search large client document archives in natural language, helping editors find reference material faster on complex projects.
- Trained Random Forest and Decision Tree classifiers that sorted incoming documents with 88% accuracy, flagging edge cases for human review and improving routing across IDS workflows.

Residential Well-being Student Leader (Incoming)

Aug 2026

Virginia Tech, Blacksburg, Virginia

- Selected through a competitive multi-stage process to mentor 300+ residents, host community events, lead group discussions, and offer guidance, while working with university staff on student well-being and crisis response.

PROJECTS

TaskFlow AI — Smart Study Planner | Python, Flask, MySQL, JavaScript | [GitHub](#) ↗ Mar 2026 – May 2026

- Developed a full-stack student productivity web app in Python Flask, MySQL, and JavaScript that ranks tasks with a 5-factor scoring algorithm (urgency, difficulty, time, priority, progress) to build daily study plans.
- Used the Groq API to generate personalized study tips in under 2 seconds, and an overload warning that alerts users when 3+ hard deadlines fall within 48 hours; tested with 12 peers who rated it helpful for planning.
- Designed a responsive dashboard with FullCalendar.js scheduling and Chart.js analytics tracking 4 metrics (completion rate, time per subject, missed deadlines, study streaks), backed by JWT auth and 4 SQL tables.

MarketPulse — Stock News Sentiment Dashboard | React, TypeScript | [GitHub](#) ↗ Feb 2026 – May 2026

- Built a full-stack finance dashboard in React, TypeScript, and FastAPI that pulls real-time news from 3+ APIs (NewsAPI, Finnhub, Alpha Vantage) and runs VADER sentiment analysis on stocks in a user's watchlist.
- Implemented an NLP pipeline with VADER and Pandas that sorts financial headlines into positive, neutral, or negative, then shows per-ticker sentiment trends through Recharts dashboards.
- Set up JWT authentication and a normalized PostgreSQL schema (users, watchlists, news cache, sentiment scores) to track per-ticker sentiment history; reviewed by a stock trader and an accountant who found it useful.

PayPath – Full Stack iOS Application | Swift, Xcode, Google Firebase | [GitHub](#) ↗ Jun 2025 – Jul 2025

- Created an iOS debt management app in Swift with a Firebase backend, using AI-generated payoff strategies that suggest personalized repayment paths based on a user's balances, interest rates, and target timelines.
- Built an EMI calculator, payment schedule generator, and amortization breakdowns with interactive payoff charts and progress tracking, secured by Face ID/Touch ID and Firebase Auth.
- Gathered feedback from 6 finance professionals who found the payoff strategies and AI recommendations practical for everyday users; currently in App Store submission review.

TECHNICAL SKILLS

Languages: Java, Python, C, SQL, JavaScript, HTML/CSS, Swift, TypeScript

Developer Tools: VS Code, Xcode, Jupyter, PyCharm, Docker, Git

Libraries/Frameworks: React, Pandas, NumPy, TensorFlow, PyTorch, Flask, FastAPI, FullCalendar.js, VADER

Databases: PostgreSQL, MySQL, SQLite