SHUBHANKAR NEHRA

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EDUCATION

Virginia Tech   Blacksburg, VA
B.S. in Computer Science | GPA: 3.72   *Aug 2024 – Present*

EXPERIENCE

Undergraduate Research Assistant   Blacksburg, VA
Backend Developer - Secure Authorization   *Aug 2025 – Present*

- Implementing secure authorization workflows and role based access controls **(RBAC)** for DBWorkout - a cloud-based, gamified SQL learning platform for students.
- **Refactoring** and extending the current RBAC architecture to be future proof, scalable, and maintainable for newer roles.
- Collaborating with Backend team to define access policies, enforce **principle of least-privilege**, and improve secure authentication design.

BusinessNext   Remote
Data Analyst Intern   *Dec 2022 – Jan 2023*

- Analyzed **11K+ retail bank loan records**, predicting default probability using Python (Random Forest, XGBoost, Logistic Regression, Gaussian Naive Bayes; best accuracy: **83.64%**).
- Performed feature engineering, model tuning, and evaluation using F1-score and AUC-ROC; delivered insights to support **risk assessment for a retail bank**

PROJECTS

Brain MRI Predictive AI Model | *Hackathon Project*   July 2025

- Developed ML model via Roboflow to predict different brain tumors from MRI scans; dataset sourced from Kaggle and modified on Roboflow.
- Hosted static webpage with HTML, CSS, JS on Vercel; achieved competitive accuracy **(98.5%).**
- Debugged deployment issues and resolved multiple **400-404 errors** using browser console logging.

Diabetes Risk Prediction Web App | *Personal Project*   July 2023

- Built full-stack ML web app using BRFSS 2015 dataset **(253K+ records)** to predict diabetes risk from **21 health metrics** with real-time AI lifestyle recommendations.
- Evaluated multiple models (Random Forest, Logistic Regression, Gaussian Naive Bayes, XGBoost) — selected XGBoost for highest F1-score and AUC-ROC.
- Developed Flask backend and HTML frontend UI; deployed publicly via Google Cloud Run.
- Gathered feedback from **80+ medical professionals** — 82% rated predictions accurate; **73% found tool effective** for public use.

CERTIFICATIONS

CompTIA A+   *Dec 2025*

ISC² Certified in Cybersecurity (CC)   *Aug 2025*

TECHNICAL SKILLS

Languages: C/C++, Python, Assembly, Java, HTML/CSS, JavaScript, SQL
Frameworks/ Tools: Git, Flask, Google Cloud Platform, VS Code, PyCharm, Eclipse, MySQL
Technologies: Linux CLI, VirtualBox, Wireshark, Windows, macOS