DEVANSHU KHADKA

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EDUCATION

University of Chicago — Chicago, IL
Master's in Applied Data Science — *Aug. 2025 – Dec. 2026*

Virginia Tech — Blacksburg, VA
Bachelor of Science in Computer Science, — *Aug. 2020 – Dec. 2024*
Bachelor of Science in Computational Modeling and Data Analytics

EXPERIENCE

Graduate Research Assistant – Biomedical Data Science & AI — September 2025 – Present
University of Chicago — *Chicago, IL*
- Implemented **Leiden clustering** in Python (Scanpy) to analyze single-cell spatial proteomics data, quantifying how nuclear and membrane biomarkers influence cluster identity and cell-type classification.
- Constructing a **segmentation and feature-extraction pipeline** for high-plex microscopy images to refine single-cell boundaries and improve clustering accuracy across cancer datasets.

Software Engineering Internship/ Co-op — June 2024 – December 2024
Berkley Alternative Markets Tech — *Manassas, VA*
- Designed and implemented **15+ Katalon test suites** for Guidewire workflows, enhancing end-to-end automation coverage across claims, checks, and litigation.
- Performed **K6 performance testing** on backend **GraphQL API calls**, supporting validation of system reliability under varied load conditions.

DevOps Intern — June 2023 – August 2023
EZOPS — *Blacksburg, VA*
- Built an internal tool to manage **20+ AWS EC2/RDS instances** with real-time controls, streamlining DevOps workflows and Agile collaboration via **Bitbucket**.

Undergraduate Teaching Assistant (CS 1114) — January 2023 – May 2023
Virginia Tech — *Blacksburg, VA*
- Mentored **50+ students** in foundational programming, guiding them through assignments and debugging code to enhance their skills. Graded homework, quizzes, and programs.

PROJECTS

Traffic AI Crash Rate Predictor | *Python, React, Next.js, TensorFlow, MongoDB, Docker* — Aug 2024 – Dec 2024
- Built a full-stack web app with **role-based access**, using **TensorFlow, React, FastAPI, MongoDB** to predict traffic crash rates and generate dynamic reports.

AI Web Scraper | *Python, Playwright, Power BI, Git* — Aug 2024 – Dec 2024
- Built an automated **ETL pipeline** using **Playwright and Python** to scrape structured parish data across paginated, dynamic web content and visualize results in a **Power BI dashboard**.

CERTIFICATES / ACHIEVEMENTS

- **AWS Certified Cloud Practitioner**
- **AWS Solutions Architect – Associate**
- **AWS Certified AI Practitioner**
- **Microsoft Azure Data Fundamentals**
- **Grand Champion – VT CMDA Data Competition**

TECHNICAL SKILLS

Languages: Python, Java, Groovy, Kotlin, R, C, MATLAB, JavaScript, SQL (Postgres), HTML/CSS
Tools/Frameworks: AWS, Azure, TensorFlow, Spark, Hadoop, Hive, React, Node.js, Flask, FastAPI, Spring Framework, MERN Stack, JUnit, Material-UI
Software: Power BI, Tableau, Excel, GitHub/GitLab, Docker, JIRA, Figma, SageMaker
Libraries: pandas, NumPy, Scikit-learn, Matplotlib, GraphQL, OpenAI API
Statistical Methods: A/B testing, hypothesis testing, regression, confidence intervals, statistical inference