

Zaid Arsalan Salahuddin

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EDUCATION

Computer Science, focus on Data-Centric Computing

Virginia Polytechnic Institute and State University

2028

Blacksburg, VA

TECHNICAL SKILLS

Programming | Java, Python, C

Data Science & AI/ML | Pandas, Matplotlib, Scikit-learn, TensorFlow, Beautiful Soup, Playwright

Web | JavaScript, HTML/CSS, Bootstrap 5, JSON

Tools | VS Code, Jupyter Notebook, Microsoft Office, Git/GitHub, Windows 10/11, Linux

PROJECTS

Class Availability Tracker | Web Scraping

Jul 2025 - Aug 2025

- Built a Python-based Discord bot to capture, store, and retrieve structured data on class availability
- Implemented persistent data storage using JSON to maintain user preferences across restarts
- Improved reliability through input validation, error handling, and user-focused system design

Machine Learning Research (IB Extended Essay) | Reinforcement Learning

Jun 2023 - Mar 2024

- Designed and evaluated reinforcement learning models to play Atari Space Invaders
- Implemented training and experimentation pipelines using Python, TensorFlow, and OpenAI Gym
- Authored a 4,000-word research report comparing model performance and experimental results

Data Analysis on Text Messages | Data Processing and Visualization

Apr 2023 - Aug 2023

- Developed a program using Python to get statistics on SMS messages
- Cleaned, structured, and analysed raw text data using Pandas
- Visualized patterns and insights using Matplotlib and Scikit-learn

Eagle Scout Project | Leadership, Project Management, Fundraising

Oct 2023 - Nov 2023

- Planned and executed the construction of picnic tables at a local school with 90+ volunteer hours
- Fundraised over \$800 through community outreach and social media engagement
- Coordinated and led 10+ volunteers to deliver the project on schedule

Loan Default Prediction (IB MYP Project) | Machine Learning, Data Visualization

Sep 2021 - Jan 2022

- Analysed data from Lending Club to identify factors influencing loan defaults
- Designed multiple machine learning models with Tensorflow, Keras, and Scikit-learn
- Created data visualizations using NumPy and Matplotlib to communicate results

WORK EXPERIENCE

Virginia Tech Dining Services | Student Worker

Nov 2024 - Present

- Worked in a fast-paced service environment while adhering to food safety and operational standards
- Collaborated with team members to support daily dining operations and peak service periods

AWARDS AND ACTIVITIES

IB Diploma | International Baccalaureate

Jun 2024

Eagle Scout | Boy Scouts of America

Apr 2024

Cyber Club Platinum Tier (Top 30%) | National Air Force Association CyberPatriot

Nov 2023

Honourable Mention | Fairfax County Regional Science Fair: Sustainable Materials

Mar 2021

Student Orgs | Badminton, Indonesian Student Association, Chinese American Society

Aug 2024 - Present