Zaid Arsalan Salahuddin

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EDUCATION

Computer Science, focus on Data-Centric Computing   **2028**
Virginia Polytechnic Institute and State University   Blacksburg, VA

TECHNICAL SKILLS

Programming | Java, Python
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

PROJECTS

Class Availability Tracker | Web Scraping   *Jul 2025 – Aug 2025*

- Built a Discord bot to help students track when a seat opens up in a class
- Employed Python, BeautifulSoup, and Playwright to scrape data from an online timetable
- Saved user settings across restarts using JSON, with input validation and error handling

Machine Learning Research (IB Extended Essay) | Reinforcement Learning   *Jun 2023 – Mar 2024*

- Investigated the most efficient neural network model in playing Space Invaders
- Implemented Python, TensorFlow, and OpenAI Gym environments to run multiple experiments
- Wrote a 4000-word report comparing the performance of the different models

Data Analysis on Text Messages | Data Processing and Visualization   *Apr 2023 – Aug 2023*

- Made a program using Python to get statistics on SMS messages
- Worked with Pandas to clean up and organize raw source data
- Utilized Matplotlib and Scikit-learn to analyse and create data visualizations

Eagle Scout Project | Leadership, Project Management, Fundraising   *Oct 2023– Nov 2023*

- Planned the logistics to build picnic tables at a local school with over 90 volunteer hours
- Fundraised over $800 from the local community through word of mouth and social media
- Coordinated with 10+ volunteers over the course of 10 hours to execute the project

Loan Default Prediction (IB MYP Project) | Machine Learning, Data Visualization   *Sep 2021 – Jan 2022*

- Analyzed data from Lending Club to identify factors influencing loan defaults
- Designed multiple machine learning models with Tensorflow, Keras, and Scikit-learn
- Utilized Numpy and Matplotlib to create charts and visualizations

AWARDS

IB Diploma | International Baccalaureate   *Jun 2024*
Eagle Scout | Boy Scouts of America   *Apr 2024*
Cyber Club Platinum Tier (Top 30%) | Air Force Association CyberPatriot   *Nov 2023*
Honourable Mention | Fairfax County Regional Science Fair: Sustainable Materials   *Mar 2021*