Arya Sanjay

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SUMMARY

Innovative and driven Computer Science student at the University of Washington-Seattle with a robust background in software development, machine learning, and analytics. Proven leader in educational and outreach initiatives.

EDUCATION

University of Washington, WA, USA (2023 - June 2026)
- B.S., Computer Science & Data Science
- Relevant Coursework - Hardware/Software Interface (C, Linux), Foundations of Computing I (Theory), Computer Programming II & III (Java), Calculus Series

Dean's List Quarterly Award, National Merit Commended Scholar

PROFESSIONAL EXPERIENCE

Undergraduate ML Research Assistant, Disaster Data Science Lab *(June '24 - Present)*
University of Washington, WA
- Developed 10 major predictive machine learning models using XGBoost and Neural Networks in Python with NBI data under U.S. Dept. of Transportation to predict bridge characteristics better aligned with predictions of current bridge performance in natural hazards, enabling realistic emergency prioritization planning for WA natural disasters.
- **Co-authoring** a research paper on factors impacting bridge performance during natural disasters, focusing on the use of the National Bridge Inventory, machine learning algorithms for noisy data, and performance measures for regression and classification tasks.
- Improved **model accuracy by ~15%** through extensive database cleaning and feature engineering leveraging Python and machine learning libraries such as TensorFlow, NumPy, and Scikit-Learn in this paid research role.
- Collaborated with advisors and UW Civil Engineering team members.

Independent Research *(Sept '22 - June '23)*
Eastside Preparatory School
- Built machine learning models (Random Forest, Logistic Regression, XGBoost) in R based on predictive factors to analyze different datasets in NY, TX, and WA to help shelters best aid people experiencing chronic homelessness.
- Developed a Shiny App recommending homeless shelters/programs based on user-selected success rates for transitioning out of homelessness.
- Conducted interviews with AI, homelessness, and ethics experts for the final paper.

ML Engineer Intern *(June '22 - Aug '22)*
CerebrumX
- Implemented linear regression models to predict cars prices using age, brand, and mileage in Python.
- Optimized algorithms with iterative training.

LEADERSHIP & ACCOMPLISHMENTS

- **Outreach Head, Women in Computing (WiC)**: Ran beginner-friendly CS workshops for 50+ K-12 students, increased attendance by ~40% through outreach efforts. *(Nov '23 - Present)*
- **Education Lead, Interactive Intelligence Club**: Managed the introductory course, ensuring smooth operations, recruiting and coordinating TAs, and improving course content and delivery. *(June '24 - Present)*
- **Interactive Intelligence Teacher's Assistant**: Facilitated a 10-week Deep Learning/Neuroscience course with Python, PyTorch, and LaTeX for largest TA group (~30% of the class) with 50+ hours of content. *(Mar '24 - June '24)*
- **Kaggle Competition Club Co-Lead:** Directed weekly predictive ML workshops on Linear/Logistic Regression, Random Forest, XGBoost models in Python (Matplotlib, Pandas, Numpy). *(Mar '24 - June '24)*

SKILLS & COMPETENCIES

- **Programming Languages |** Java, JavaScript, C, Python, R, HTML, MATLAB, CSS, SQL
- **Development Tools |** Visual Studio, Git, RStudio, IntelliJ, React, Linux
- **Machine Learning & AI |** PyTorch, Tensor Flow, NLP