Renee Singh

reneexsingh@gmail.com | https://www.linkedin.com/in/renee-singh7 | https://opalsugar.github.io/reneesinghportfolio

CORE SKILLS

Machine Learning, Deep Learning, Computer Vision, Predictive Modeling, Probabilistic Modeling, Bayesian Inference, Computational Science, Data Modeling, Statistical Analysis, Research Methods

EDUCATION

Bachelor of Science in Informatics | University of Washington Seattle   Graduation Date: June 2026
Data Science and Project Management
Relevant Coursework: Scientific Computing, Advanced Multivariable Calculus, Matrix Algebra, Differential Equations, Advanced Data Science, Database Modeling, Database Design and Management, AP Placement in General Biology 2

TECHNICAL SKILLS

Programming: Python, SQL, R, Javascript, HTML, CSS
Tools and Platforms: AWS, Azure, Tableau, MongoDB, PowerBI, Github, Git
Frameworks and Packages: pandas, numpy, scikit-learn, python-terrier, pytorch, matplotlib, p5.js
Data Management and Processing: ETL/ELT, REST APIs, Event-Driven Architecture, Data Warehousing

TECHNICAL PROJECTS

Machine Learning and Deep Learning for Deepfake Detection
- Built SVC and MLP classifiers for deepfake detection, achieving 82% test accuracy on real-world data.
- Processed 2000 facial images via grayscale conversion and PCA-based eigenfaces to isolate high-frequency texture irregularities, distortions and noise, enabling more robust classification.
- Optimized hyperparameters with GridSearchCV, increasing precision and recall by 15%.

Scalable Health Metrics Database for Analytics
- Built a MongoDB-based health metrics database with optimized schema and indexing, improving query speed by 30% to enable faster exploratory and statistical analysis by downstream users.

RELEVANT EXPERIENCE

Hackathon Director | UW Women in Informatics| Seattle, WA   March 2025 - Present
- Directing a 11-person cross-functional team over a 9-month planning cycle to execute UW's largest DEI-centered collegiate hackathon in January 2026 for ~300 undergraduate participants.
- Secured $12.3k in grant and sponsor funding from 8 companies: Accenture, Adobe, Boeing, Cyborg Mobile, EY, Microsoft, Pitchbook, and Lululemon.
- Organized career panels and corporate tours with companies including the Allen Institute, Microsoft, Workday, and American Express, connecting 100+ students with industry networks.

Teaching Assistant | University of Washington Information School | Seattle, WA   June 2024 - Present
- Instructed 100+ students in R-based data analysis and SQL-based database design, emphasizing statistical reasoning and query optimization.
- Delivered detailed feedback on assignments, contributing to a 90% 4.0 GPA rate.
- Led weekly office hours, translating advanced statistical concepts and optimizing SQL workflows.

Undergraduate Researcher |University of Washington Information School | Seattle, WA   April 2024 – Present
- Designed and evaluated gamified interventions for misinformation literacy using participatory design and data-driven assessment of learning outcomes.
- Led a 6-week field study with 20 high school students, collecting surveys and behavioral data on engagement with game-based learning and perceptions of misinformation.
- Conducted and analyzed interviews of 15 middle and high-school aged students, qualitatively coding responses to identify patterns in how adolescents' reason about misinformation.
- Collaborated with graduate researchers to refine study protocols, pilot experimental conditions, and translate qualitative feedback into testable hypotheses for subsequent iterations.