Ishitha Singh Kanoj

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PROFESSIONAL SUMMARY

Computer Science student at Rutgers University with hands-on experience in statistical analysis, data wrangling, and machine learning applied to real-world datasets, including algorithmic bias auditing, regression modeling, and hypothesis testing. Proficient in Python, R, SQL, and analytical tools including Pandas and NumPy, with experience building an SQL analytics database that unified 6 e-commerce data sources and supporting attribution analysis across 400+ referral sources. Familiar with Git and Jupyter Notebook, and prepared to contribute to predictive modeling and analytical pipeline initiatives.

EDUCATION

Rutgers University – Newark **May 2027**

Bachelor of Science, Computer Science *Newark, NJ*

- **Coursework:** Machine Learning & AI, Statistics & Machine Learning, Data Structures & Algorithm Design, Database Management, Operating Systems, Measurement & Testing

EXPERIENCE

Breaking Games **Jul 2026 - Sep 2026**

SQL & Database Architecture Extern

- Designed and built an analytical SQL database, unifying 6 disconnected e-commerce data sources into one queryable system with Claude as an AI co-pilot; engineered cleaned views that filtered bot traffic and invalid data from downstream queries.
- Built marketing-channel attribution across 400+ referral sources to connect ad spend to revenue, then translated the analysis into a recommendation for the next quarter's advertising budget allocation.
- Built an HTML and Chart.js dashboard and presented a Holiday Game Plan outlining what to reorder, where to spend, and what to fix.

New Student & Family Programs, Rutgers University–Newark **Jun 2024 - Aug 2026**

Orientation Leader *Newark, NJ*

- Mentored 100+ incoming students through orientation programming, serving as a peer resource for academic and campus life questions.
- Collaborated cross-functionally with faculty, staff, and student services to coordinate logistics and ensure a smooth onboarding experience.

PROJECTS

Statistical Analysis Portfolio **2024**

- R, RStudio, Statistical Testing, Regression Modeling
- Applied permutation tests, t-tests, and chi-square tests to conduct statistical analysis and validate hypotheses across domains including EV performance and behavioral psychology.
- Built and compared linear regression models to identify Airbnb price drivers, evaluating statistical model performance with R-squared, RMSE, and AIC.
- Conducted end-to-end exploratory data analysis, data wrangling, and visualization to uncover feature distributions and relationships.
- Applied bootstrapping and stratified sampling to estimate confidence intervals and simulate sampling distributions.

Algorithmic Bias Audit – COMPAS Dataset **2024**

- Python, Pandas, NumPy, Jupyter Notebook
- Performed end-to-end data manipulation on a 60,000-row recidivism dataset using Python, Pandas, and NumPy; engineered features by parsing dates, calculating ages, and encoding categorical variables.
- Resolved one-to-many relational data integrity issues by grouping patient identifiers and segmented data by risk type, including Recidivism, Violence, and FTA, for targeted analysis.
- Generated cross-tabulations of demographic variables vs. risk scores to surface and quantify predictive bias by gender.

Full-Stack Web Application | CodePath Capstone **2025**

- HTML, CSS, JavaScript, Node.js, Express.js, Git
- Designed and built a responsive full-stack web application as the capstone for a 10-week intensive CodePath software engineering program.
- Engineered a dynamic front-end using HTML, CSS, and JavaScript; implemented a back-end with Node.js and Express.js to handle HTTP requests and RESTful API routes.
- Managed source control with Git and followed Agile sprint methodology across the full development lifecycle.

CERTIFICATIONS

- CodePath – Intro to Web Development **2025**

SKILLS

- **Languages**: Python, R, SQL, Java, C, JavaScript, HTML/CSS
- **Frameworks & Libraries**: Pandas, NumPy, Node.js, Express.js, Scikit-learn, Matplotlib, Seaborn
- **Developer Tools**: Jupyter Notebook, RStudio, Git, VS Code, Google Cloud Platform
- **Concepts**: EDA, Regression Modeling, Statistical Testing, Data Wrangling, Machine Learning, Agile Methodologies, REST APIs, Geospatial Data Analysis, Agricultural Commodity Markets, Deep Learning, Agronomics, Big Data Technologies