Husna Manalai

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github.com/husnamanalai

Education

Bard College, BA in Computer Science — Graduation – May 2026
- **GPA:** 3.7/4.0
- **Relevant Coursework:** Object-Oriented Programming, Data Structures, Algorithms, Discrete Math, Artificial Intelligence, Databases, Software Development, Machine Learning, Linear Algebra, Calculus II, Machine Media.

Technical Skills and Languages

- **Technical Skills:** Microsoft Office, HTML, CSS, JavaScript, Java, SQL, PHP, C++, Python, R
- **Other Skills:** Clear Communication, Problem Solving, Teamwork, Leadership

Experience

Data and Technology Intern, Third Act – Brooklyn, NY — Sept 2024 – Dec 2024
- Wrote Python scripts and SQL queries to automatically identify and merge duplicate contacts in the EveryAction CRM, improving data accuracy and reducing manual cleanup time
- Wrote a Google Apps Script to automate the manual process of downloading contribution data from ActBlue CRM, formatting it to match EveryAction CRM's template, and uploading it, which streamlined data transfers and reduced time spent on donation tracking and report generation by 97%.
- *Utilized:* Python, SQL, Google Scripts, Microsoft Excel, EveryAction CRM, ActBlue CRM, Google Sheets.

Research Assistant, Bard Summer Research Institute – Red Hook, NY — May 2024 – Sept 2024
- Wrote Python scripts to build a simple probability model for Even Quads by counting all possible four-card groups in a k-card layout and estimating the number of winning quads, helping to improve game balance and strategy.
- Used C# in Unity to develop a two-player online version of Quads, leading a team through the design and implementation process.
- Designed a math card game to help players solve problems involving probability and pattern recognition, inspired by games like SET.
- *Utilized:* Python, LaTeX, C#, Unity.

ASCLab (Algebraic and Symbolic Computation Lab) Research Assistant, — May 2023 – Sept 2023
Bard College – Red Hook, NY
- Conducted data analysis for a project on the Unification Algorithm For the First-Order Theory of Quandles.
- Classified 250 knots from the Tait-Rolfsen knot table. Created equations that turn a 3D knot into a 2D drawing using OmniGraffle. We used a special algebra tool (a quandle) to "color" the knot completely, which tells us if the knot is hard (NP-complete) or easy (tractable).
- Developed a Python script that generates quandle expressions, which were used to test our Prolog program.
- *Utilized:* Python, Prolog, OmniGraffle, Quandle algebra, Data Analysis.

Projects

Predictive Analytics for Bike Rental Demand | Machine Learning — GitHub Link
- Wrote Python scripts using two machine learning models to predict bike rental demand: a Fully Connected Neural Network (FCNet) for regression and a Recurrent Neural Network (RNN) for time-series prediction.
- Evaluated model performance with mean squared error (MSE) and R-squared (R2) evaluation metrics, uncovering key seasonal trends.
- *Utilized:* Python, TensorFlow, FCNet, RNN, and NumPy.

Smart Recipe Recommendation Engine | Data Science — GitHub Link
- Wrote a Python script that recommends recipes using cosine similarity.
- Used Python, pandas, and scikit-learn to compare ingredients, diets, and cuisine types.
- Built scalable modules that apply vector similarity to make fast and accurate suggestions.
- *Utilized:* Python, Pandas, and Scikit-learn.