

# SURAJ NAVEEN

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## Portfolio

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### Education

#### University of Wisconsin-Madison

Bachelor of Science in Computer Science and Data Science

(May 2026)

Related Coursework: Data Structures, Algorithms, Discrete Mathematics, UX Web Development, Machine Learning.

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### Experience

#### Evenforce Technologies Pvt. Ltd

(June - July 2023)

Software Development Intern

Bangalore, India

- Developed the UI for Getafix, an AI-powered garage management tool, in collaboration with a team of 10, enhancing user engagement and streamlining workflow efficiency.
- Gained hands-on experience with PHP and MySQL by developing core features and working with a team of 5 to standardize project documentation for technical accuracy.

#### Undergraduate Tutor - Computer Science Department

Madison, WI

University of Wisconsin-Madison

(January–May 2024)

- Tutored students in **CS300: Programming III** and **CS400: Programming IV**, providing support in object-oriented programming, data structures, and software development.
  - Held **Drop In hours** for supporting students mastering concepts and improving problem-solving and coding skills.
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### Honors

#### MADHACKS Hackathon 2023 | Hacker's Choice Award Winner

(March 2023)

- Co-developed **BroLang**, a beginner-friendly programming language using Gen-Z terms, by designing and implementing its core parser and logic to support conditionals, loops, and mathematical operations, making coding more accessible and engaging for beginners.
  - Awarded **Hacker's Choice** for delivering an innovative and engaging project among 100+ participants.
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### Skills

**Languages:** Java, R, Python, Swift, HTML, CSS, JavaScript, C++, PHP, C#, AJAX, Git, Docker

**Frameworks:** Matplotlib, Pandas, Scikit-learn, PyTorch, Tensorflow, React

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### Projects

#### Music Recommendation System | Python, Spotify API, Flask, SVD, scikit-learn

- Built a hybrid music recommendation system analyzing over 100,000+ songs from the Spotify API, combining content-based filtering (audio features like danceability, energy, tempo) with collaborative filtering (SVD) for personalized recommendations.
- Improved recommendation accuracy by 20% through the integration of cosine similarity and matrix factorization, delivering more relevant song suggestions.
- Designed a scalable Flask web application for real-time music recommendations, reducing response time by 40% with optimized data processing using pandas, scikit-learn, and Surprise.

#### Soccer Striker Performance Analysis | R, ggplot2, dplyr

- Conducted analysis on strikers' performance using Kaggle's "Combined FIFA DataSet (1930-2014)", applying R for data handling and Welch's t-test to evaluate age-related performance trends. Identified peak performance at age 36, underscoring the role of experience in soccer tactics.
- Utilized skills in data analysis, statistical modeling, R programming, and sports analytics throughout the project.

#### FashionMNIST Classification Using PyTorch | Python, PyTorch, Torchvision

- Built and trained a neural network to classify FashionMNIST images, achieving 85.70% training accuracy and 84.73% test accuracy using stochastic gradient descent (SGD).
- Applied data preprocessing techniques such as normalization and batching, and integrated clear visualization of prediction confidence for the top 3 classes.
- Optimized the model with ReLU activations and evaluated performance using cross-entropy loss and accuracy metrics.

More projects showcased on my [Portfolio](#).