# SURAJ NAVEEN

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## Education

**University of Wisconsin-Madison** *(May 2026)*

Bachelor of Science in Computer Science and Data Science

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

## Skills

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

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

## Experience

**Evenforce Technologies Pvt. Ltd** Bangalore, India

*Software Development Intern* *(June - July 2023)*

- Collaborated with a team of 10 to design and implement the UI for Getafix, an AI-powered garage management tool, boosting user engagement and workflow efficiency.
- Developed core features using PHP and MySQL and partnered 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.
- Supported students in mastering concepts and improving problem-solving and coding skills.

## Honors

**MADHACKS Hackathon 2023** *(March 2023)*

- Created **BroLang**, a beginner-friendly programming language using Gen-Z terms, with a Java-based parser and compiler for conditionals, math operations, and loops.
- Won the **Hacker's Choice Award** for delivering a standout project among **100+ participants**.

## Projects

**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.

**PCA and t-SNE Based Image Analysis and Clustering | Python, NumPy, SciPy, Matplotlib**

- Reduced 1024-dimensional facial data (2414 images) using PCA, retaining 90% variance with over 80% dimensionality reduction.
- Achieved reconstruction quality metrics of PSNR: 20.01 dB and SSIM: 0.76, preserving key facial features during compression.
- Visualized facial data patterns with t-SNE and identified clusters using K-Means (Silhouette Score: 0.26).

**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.

**Notitia Analysis Compilation | HTML, CSS, Javascript, Python**

- Built a website to showcase data analysis projects, integrating interactive visualizations and algorithms.
- **Covid-19 Analysis of India**: Visualized pandemic trends using Python to analyze datasets with over 100,000 entries.
- **University Score Predictor**: Predicted university ratings (scale 40–100) based on more than 10 input parameters using the K-nearest neighbors (KNN) algorithm.