

NAREN KHATWANI

◇ Jersey City, NJ

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OBJECTIVE

To work in a challenging professional environment and thereby utilize my talent, skills, and experience in the field of Data Science.

EDUCATION

Ph.D, New Jersey Institute of Technology September 2023 - Present
Major: Data Science
Coursework: Applied Statistics, Introduction to Big Data, Machine Learning.

Master of Science, New Jersey Institute of Technology September 2021 - May 2023
Major: Computer Science
Coursework: Java Programming, Database Management System Design, Operating System.

Bachelor of Engineering, University of Mumbai May 2017 - May 2021
Major: Computer Engineering
Coursework: Data Structures, Analysis of Algorithms, Computer Networks, Compiler Construction.

SKILLS

Programming Languages	Java, Kotlin, Python, JavaScript, TypeScript, Node.js, Chapel
Web Technologies	HTML, CSS, Angular, Jira, Flutter
Database and Tools	PL/SQL, Heroku, Jupyter Notebooks, Android Studio
Design	User Interface Design (UI), Zeplin, Wireframing, Adobe XD, Canva, Figma
Frameworks and Libraries	Arkouda, Streamlit, NumPy, pandas, scikit-learn, matplotlib
Other	CI/CD, SaaS, SDLC, Argo, Jenkins, Data Center Operations, Data Analysis, Version Control using Git, Microsoft Office, Image Processing
Research Interests	Medical Informatics, Medical Ontologies, Ontology Enrichment

TEACHING EXPERIENCE

Adjunct Instructor September 2024 - Present
New Jersey Institute of Information Technology, New Jersey
Fall 2024 and Summer 2025

- Taught CS 331: **Database System Design and Management**, focusing on key concepts such as database design, SQL programming, normalization, and transaction management, providing both theoretical and practical knowledge.
- Developed comprehensive course materials and assessments, ensuring students gain a robust understanding of database systems and are well-prepared for real-world applications in the field.

Teaching Assistant September 2023 - Present
New Jersey Institute of Information Technology, New Jersey

- Teaching Assistant for CS 632: **Advanced Database System Design**, CS 331: **Database System Design and Management**, DS 636: **Data Analytics with R program**
- Offering weekly consultations during dedicated office hours to address graduate student questions and provide clarifications.
- Assessing and grading student assignments and homework, ensuring timely and accurate feedback.

WORK EXPERIENCE

Graduate Researcher October 2021 - August 2023
New Jersey Institute of Information Technology, New Jersey

- **Arkouda** – research a software package that allows a user to interactively issue **massive parallel computations** on distributed data using functions and syntax that mimic NumPy, the underlying computational library used in most Python data science workflows.
- **Objective** - Test how a user can experience Arkouda and do a performance comparison study.

Technology Engineering Intern June 2022 - August 2022
Forbes Media LLC, New Jersey

- Improved the User Interface of the Content Management System Bertie by creating Angular components per the Product Design Team – **improved user interaction with CMS by seventy percent**.
- Part of the **pilot team for iOS and Android Development** of the Forbes Mobile Application.
- **Designed the architecture** for Multivendor Call to Action feature to **increase the customer conversion rate by fifty percent**.

Network Operations Centre Intern
GPX India Pvt. Ltd, Mumbai, India

December 2019 - December 2019

- Worked with the Network Operations Center (NOC) and improved the workflow of Building Management System (BMS) by visualizing the existing Chiller Plants’ data using Python.
- Improved data handling efficiency with the use of python scripts saving six to eight hours of manual scraping of data in CSV files generated by the client data of the Data Center.

Intern
Fox Domotics Pvt. Ltd, Mumbai, India

June 2019 - July 2019

- Successfully implemented the data analysis of Play Store application download data and drew inferences regarding their usage and compatibility.
- Predicted the future application download trends in accordance with the existing user reviews (sentimental analysis) using Machine Learning.

Business Development Intern
Haplotech IT Solutions LLP, Mumbai, India

March 2019 - August 2019

- Proactively organized weekly briefings with the marketing lead and was responsible for managing negotiations with clients.
- Contributed to the content ideation that led to developing a new content strategy and improved the sales pitches by twenty-five percent.

Intern
Suven Consultants And Technology Pvt Ltd, Mumbai, India

June 2019 - July 2019

- Performed **Analysis of Meteorological Data** to study the Influence of Global Warming on temperature and humidity. This was implemented using data exploration and visualization tools in python.
- Implemented **recognition of handwritten digits** from images to give its quantifiable value in text form.
- Carried out Market Basket Analysis incorporating **Apriori algorithm** by considering the important sale parameters. This analysis proves to be an aid in enhancing the sales performance of a supermarket.

PUBLICATIONS

Conference Presentation

1. Naren Khatwani, Navya Martin Kollapally, Lijing Wang, James Geller. [Evaluating RAG and Non-RAG Pipelines for Concept Discovery in Environmental Health Ontologies](#). In *AMIA 2025 Annual Symposium*, 2026 (Accepted).
2. Naren Khatwani, Lijing Wang, Shmuel T. Klein, James Geller. [Convergence to steady state in LLM-Generated Ontological Concepts](#) . In *MIE 2025 - "Intelligent health systems – From technology to data and knowledge"*, 2026 (Accepted).
3. Naren Khatwani, Lijing Wang, James Geller. [To what Degree can LLMs Support Medical Informatics Research? Examining the Interplay of Research Support LLMs with LLM Critics](#). In *AMIA 2025 Annual Symposium*, 2025.
4. Naren Khatwani, Lijing Wang, James Geller. [A Concept Utility Framework For Incremental Ontology Exansion](#). In *MCCSIS 2025 - 17th International Conference on e-Health*, 2025.
5. Naren Khatwani, James Geller. [Population Group 2.0: Bringing the UMLS Semantic Network up to speed](#). In *MIE 2025 - "Intelligent health systems – From technology to data and knowledge"*, 2025.
6. Richard Joseph, Naren Khatwani, Rahul Sohandani, Raghav Potdar, and Adithya Shrivastava. [Food Aayush: Identification of Food and Oils Quality](#). In *2022 Springer - Smart Innovation, Systems and Technologies*, 2022.
7. Anish Adnani, Naren Khatwani, Supriya Patil. [Attenuation of a Pandemic Disease Spread](#). In *2020 International Research Journal of Engineering and Technology (IRJET)*, 2020.
8. Gayatri Patil, Naren Khatwani. [Prediction of Structural Integrity of Residential and Commercial Buildings](#). In *2019 The Institute of Engineers (India), Pune Local Chapter*, 2019.

Workshop Presentation

1. Oliver Alvarado Rodriguez, Naren Khatwani, Zhihui Du, and David Bader. [Interactive Large-Scale Data and Graph Analytics](#). In *2023 Principles and Practice of Parallel Programming*, 2023.

PROJECTS

Analysis of Physiological Responses of Game Players
Independent Study

2024

- This project works on players’ physiological responses during League of Legends matches, specifically focusing on how intense gaming moments, such as kills, influence players’ stress levels. By measuring Galvanic Skin Response (GSR) and heart rate variations, we found patterns that indicated heightened emotional or cognitive stress during gameplay.

Global Food Prices Data Analysis Using Parallel Computing

2022

Graduate Research Project

- This Data Analysis project aims to show the performance comparison between Arkouda (a software package that allows a user to interactively issue massive parallel computations on distributed data) and Pandas by analyzing the open-source Global Food Price - dataset with more than 700K rows.
- The work done falls under the domain of **High-Performance Parallel Computing** which is estimated to improve the limit of existing Pandas library by **four hundred percent**.

Food AAYUSH

2021

Final Year Undergraduate Engineering Project

- The project aims to build an application for the analysis of the quality of food and to detect repeated frying on cooking oils based on the visual properties of the food items and the pH value of the oils.
- The analysis of the nutritional value of food items is being done using a python-based framework known as Streamlit and the oil quality is analyzed via a **portable pH sensor**.
- The outcome of the project **helps youngsters and inexperienced vegetable buyers** determine the food and oil quality.

ACCOMPLISHMENTS

Github Universe’24 Travel Award, GitHub, San Francisco, USA

2024

- GitHub Universe is the global, annual event for the developer community to hear from industry leaders and observe interactive sessions on AI, security and developer experience.

Github Universe’23 Travel Award, GitHub, San Francisco, USA

2023

- Actively participated in beta testing GitHub Copilot, explored CodeQL for advanced code analysis, and attended specialized demonstrations focused on preventing secret sharing leaks.

Reviewers Choice Award, IEMAICLOUD, Springer, UK

2021

- Our project “*FoodAayush*” which is hosted on [GitHub](#) was honored with the Reviewer’s Choice Award at [IEMAI Cloud](#). Our findings and contributions were subsequently published in a [Springer book](#).

Fourth Place Winner, GitHub Syrus Hackathon

2020

- Our team secured the 4th place in a hackathon partnered with [GitHub](#) called *Syrus Hackathon*. We were recognized for our data analysis project focusing on *Bird Strike Analysis*.

Best Technical Paper, Institute of Engineers, India

2019

- Our team was awarded the *Best Technical Paper* at the *Institute of Engineers* for our innovative approach in predicting structural lifespan. By analyzing construction parameters, our system aids civil engineers in enhancing construction efficiency and sustainability.

VOLUNTEERING

Github Campus Expert

May 2020 - Present

GitHub x New Jersey Institute of Technology

- GitHub Campus Experts are student leaders that strive to build diverse and inclusive communities to learn skills, collaborate on projects, and share their experiences.
- Created a NJIT HPC Initiative Community at the New Jersey Institute of Technology.
- Organizing events on campus to spread awareness about Parallel Computing being a viable research domain alongside Chapel Programming Language.

Student Mentor

Feb 2023 - December 2024

New Jersey Institute of Technology

- Mentor admitted graduate students by connecting with them and answering their questions.
- Organizing events on campus to spread awareness about Parallel Computing being a viable research domain alongside Chapel Programming Language.

HOBBIES

Photography, Numismatics, Story Writing, Food Blogging.

LANGUAGES

English, Hindi, Sindhi, Marathi, Sanskrit.