

Education

University of Wisconsin-Madison, Madison, WI

B.S. Computer Science, B.S. Astronomy - Physics, Certificate - Data Science

expected December 2025

Pace Junior Science College, Mumbai, India

High School Diploma in Science

June 2021

Skills

Computer Science - Java (Data Structures and Algorithms), C, HTML, VB, JavaScript, Python, Discrete Mathematics, Calculus, Assembly-Language Programming, Algorithms, Big Data Systems including Spark, Scala, Cassandra and HDFS**Other courses taken** - Microeconomics, Advanced engineering Physics, Astronomy - Cosmology, Stellar Astrophysics, Chemistry**Global Languages** - English, Hindi, Marathi**Public speaking, Customer service, Leadership, Data Analysis, Management, Microsoft Office, Teamwork**

Computer Science Experience

CS 544 - Big Data Systems - Language: Python, University of Wisconsin-Madison

Jan 2024 - May 2024

- Specialized in deploying distributed systems for data storage and analytics, using tools like Docker, PyTorch, HDFS, Spark, Cassandra, and Kafka.
- Made projects using SQL and CQL, processed streaming data, and learned training machine learning models on distributed systems

CS 354 - Machine Organization and Programming - Language: C, University of Wisconsin-Madison

Jan 2024 - May 2024

- Explored core computer system architecture in detail, focusing on Virtual Address Space, and memory hierarchy including caching.
- Dived into dynamic memory management on the Heap, assembly language interactions with the Stack, and system communications via interrupts/signals.

CS 577 - Algorithms, University of Wisconsin-Madison

Sept 2023 - Dec 2023

- Studied and applied Greedy, Divide and Conquer, Dynamic Programming, Network Flow and Intractability Algorithms on different types of real world computer science problems

CS 400 - Data Structures - Language: Java, University of Wisconsin-Madison

Sept 2022 - Dec 2022

- Implemented Hashtables, Red-Black Tree Algorithm, and Dijkstra's Algorithm in three different applications to create a library database, university students database, and a university campus map respectively. Built a website using HTML, CSS and Javascript. Made use of Java FX to run the applications.

Home Revise - UI/UX (Internship), Mumbai, India

Sept 2021 - Nov 2021

www.homerevise.co.in

- Completed a UI/UX course on Coursera and redesigned Home Revise's company website, content writer for the company's website

The Corporate Coach - App Development (Internship), Mumbai, India

May 2021 - Aug 2021

- Guided the Corporate Coach to design an app called 'Syllabus Valley' by doing a course on JavaScript and Node JS.
- Designed the login, user details and information, and home screen along with a few demo screens for the app using JavaScript, React Native, and VSC.

Astrophysics and Physics Experience

Physics Learning Center - Peer Mentor Tutor, University of Wisconsin-Madison, Madison, WI

Aug 2023 - present

- Facilitated learning for students every week to improve problem-solving skills in University Physics I and II
- Devised instructional activities with attainable goals, empowering students to master physics concepts.
- Utilized a diverse range of teaching strategies such as repetition, visual aids, and community-based learning exercises to identify the optimal approach for each individual student.
- Attended weekly meetings with other tutors to plan the content taught every week and brainstorm various types of teaching techniques.

Undergraduate Learning Center - PrePS Facilitator, University of Wisconsin-Madison, Madison, WI

Sept 2023 - present

- Created bi-weekly session plans on Physics principles and practice problems to teach a group of 12-20 undergraduate students.
- Lead students in group learning by working through practice worksheets, communicating challenging subjects in an effective manner and creating a comfortable learning environment for students from all backgrounds.
- Continuously improving leadership and organization skills by managing the canvas course, attending weekly meetings with with facilitators to discuss teaching strategies and corresponding with the current Physics instructional staff.

Wisconsin IceCube Particle Astrophysics Center - Student Researcher and Analyst, UW Madison

Aug 2023 - present

- Researching the data collected by HAWC and IceCube Neutrino Observatory to look at the anisotropy of cosmic rays coming from the universe.
- Making use of Jupyter Notebook, Numpy, Pandas, and Seaborn along with Python to analyze the data for research papers regarding the anisotropy.

Astronomy 199 - Undergraduate Research Assistant, UW Madison

Sept 2022 - Dec 2022

- Using Python and Matplotlib to analyze the chemical composition, evolution, and luminosity of proto-planetary disks observed by the James Webb Space Telescope, determining potential planet formation and habitability based on disk size.

Blog Writing

July 2021 - present

www.rivakore.blogspot.com

- Started writing a blog page as an interest in Astronomy and Space, and now it has 34 blog posts with Google AdSense approval

Work Experience

Wisconsin Union - Catering and Event Manager, UW Madison

July 2022 - Dec 2022

- Pre-event management and preparation, post-event closing and clean-up, opening and closing the office, food orders and event management