Shekar Krishnamoorthy

shekar.km26@gmail.com
858-649-9732
San Diego, California
GitHub LinkedIn

EDUCATION

University of California, San Diego (GPA: 3.6) **September 2022 – June 2026**
Major: Data Science - Machine Learning and Artificial Intelligence
Relevant Coursework: Data Science Principles, Data Structures and Algorithms, Linear Algebra, Multivariable Calculus, Advanced Probability and Statistics, Data Science in Practice and Application, Statistical Analysis
Del Norte High School (GPA: 4.2) **August 2018 – June 2022**

WORK EXPERIENCE

- **Nanoscale Photonics Research Assistant** **January 2023 – Present**
  - Awarded an NSF Research Experience for Undergraduates Fellowship.
  - Quality tested the performance and efficacy of a university research kit by running insertion loss and noise error simulations on various photonic components.
  - Modeled integrated 2D and 3D optical components using Finite-Domain-Time-Difference software.
  - Assisted in the development of an analytical research paper by measuring and comparing transmission rates for different types of adiabatic tapers
- **Axalume Inc. Software Development Intern** **June 2024 – September 2024**
  - Created a graphical user interface for the company's tunable optical laser using Python and Tkinter to make varying the laser output power, wavelength, and range more efficient during operation.
  - Developed a python script to control and move a 3D mounting device which uses coupled linear actuators and piezoelectric motors to precisely move a laser.

HONORS AND AWARDS

- **Greater Expectations Hackathon Winner** **February 2021**
  - Competed in a coding hackathon conducted by Superconductive Inc. and used Python to create programs to validate data using Benford's Law and correlation coefficients.
  - Awarded the "most useful code" prize and had our work incorporated into the company's data update.
- **Southern California Junior Science and Humanities Symposium Semi-Finalist** **January 2020**
  - Optimized the biomechanics of a tennis serve motion to increase ball velocity and proved this by using mathematical models based on Newtonian physics and statistical data from controlled experiments.
  - Presented the methods and conclusions of my research at the JSHS convention to multiple experts and students as an independent researcher and was awarded the semifinalist position.

PROJECTS

- **Personal Portfolio Website** http://Shekarkrishnamoorthy.com
  - Coded from scratch using HTML, Java Spring Boot, and Maven, and deployed with AWS EC2.
  - Applications: Front-end Design, Dataset Calculator, Image database, Palindrome checker, News API.
- **Analysis of Cooking Data** https://jasminehong2392.github.io/jasmineshekar-recipes/
  - Performed analysis on a real dataset containing cooking recipes and presented findings on Github Pages.
  - Cleaned data and performed exploratory data analysis, conducted hypothesis testing for univariate and bivariate distributions, and used Scikit-learn pipelines to create a predictive regression model.

SKILLS

- **Technical** - Python, Java, Pandas, HTML/CSS, Lumerical, Scikit-learn, AWS, SQL, R
- **Leadership and Teamwork** – Tau Kappa Epsilon Technology Chair, TiE Young Entrepreneurship Program, High School Varsity Tennis Captain, Nighthawks Youth Tennis Club Coach