Bhavesh Kumar

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Education

University of Washington   Seattle, WA
B.S. in Computer Science (Honors) & Minor in Computational Finance   Expected Graduation June 2025

Skills

Languages : Python, JavaScript, TypeScrpit, C, C++, Java, Matlab, SQL, Julia
Tools : Pytorch, Tensorflow, NodeJS, Django, ReactJS,, AWS, PostgreSQL, Docker/Kubernetes, QT, Perforce, Git, Bash

Professional Experience

Cadence Design Systems   Burlington, MA
Software Engineering Intern   June 2023 - Sept 2023

* Part of the Allegro research and development team. Worked on creating a suggestive AI feature on a PCB design software capable of predicting the next possible components. This feature is expected to increase sales of the Allegro product and help transition inexperienced designers to an industry-grade software.
* Worked on the Allegro UI with a trillion-dollar client to implement specific features and resolve product issues.
* Created a 3-legged Autodesk OAuth 2.0 API increasing users on the platform.

UW Data Science in Elementary Particle Physics Lab   Seattle, WA
Student Researcher   Aug 2022 - June 2023

* Utilizing deep learning in quantifying the energy scale of hadronically decaying tau leptons at the ATLAS using Mixture Density Networks (MDN). Working under the guidance of Prof. Shih-Chieh Hsu and Quentin Buat
* Developed a graph neural network with a mixed density layer as a proof of concept using the tau dataset which produces more accurate energy scale calibration. This work helps generate a better understanding of the Higgs and Tau leptons.

AI-Camp (Startup)   Palo Alto, CA
Software Developer   Mar 2021 - Feb 2022

* Developed an online referral program which decreased customer acquisition costs by 30%
* Engineered the data pipeline structure connecting AI-Camp to 3 different payment platforms and built a business management dashboard that keeps track of all revenue streams and expenses to boost financial productivity.
* Led a team of 5 developers to create an all-inclusive virtual classroom management platform capable of generating Zoom classrooms, keeping track of student attendance, and sending out classwide reminders.

UC Berkely Computational Approaches to Human Learning Research Lab   Berkeley, CA
Student Researcher   Oct 2020 - Jan 2021

* Part of the Open Adaptive Tutor team. Worked on developing a web scrapper in charge of collecting mathematical textbook problems and storing them as data.
* Performed data pre-processing and standardization of data in order to reproduce a more accurate training of the model

Publications

Kumar, Bhavesh. "ViT Cane: Visual Assistant for the Visually Impaired." 11th International Conference on Pattern Recognition Applications and Methods, doi.org/10.48550/arXiv.2109.13857.

Projects

Generative Visual Question Answering : A Visual Question Answering model to create results on temporal generalization
Hunched AI : Computer vision model to detect and correct human posture while working on a computer
Dubvelopers SWEEC Website : Coding lead for a team of 5 developers used react frontend and sanity SEO
Snake Algorithm : Visualization of various path-finding algorithms while playing snake

Noteworthy Awards

Citadel Terminal West Coast Regional (Top 10)
Kaggle Expert Level
USA Coding Olympiad Gold Level
2021 California Science and Engineering Fair Finalist (Top 10)
American Invitational Math Examinee Qualifier