Parsh Verma

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EDUCATION

University of Connecticut | Freshman | Molecular & Cell Biology and Applied Mathematics
Pomperaug High School, Southbury, CT | Top 5 of Graduating Class | 4.260 (Unweighted) | 7.636 (Weighted)
Certifications | HarvardX Tiny ML, CS50 Web Programming, GIAC Foundational Cybersecurity Technologies
Core Classes | AP Chem, AP Bio, AP Calculus AB & BC, AP Physics 1 & C, Neuroscience, Investing in the Stock Market

SKILLS

Technical Skills | R, Python, TensorFlow, Django, C#, Java, HTML, CSS, JavaScript, MySQL, SQLite, GitHub
Soft Skills | Fast Learner, Communication, Listener, Critical Thinker, Proficient Problem Solver, Creative
Languages | Bilingual Proficiency - English & Hindi | Actively Acquiring - Spanish

RESEARCH EXPERIENCE

AI-Based Off-Target Prediction Methods for CRISPR-Cas9 Gene Editing Published in peer-reviewed Journal
Mentor | Dr. Rajagopal Appavu PhD | Health Care Studies Professor at the University of South Florida
- Analyzed and Evaluated various neural network models to enhance CRISPR's on-target efficiency.

Hybrid Neural Networks for Off-Target Prediction in Gene Editing Published in peer-reviewed Journal
Mentor | Dallin Lowder | Ph.D. Candidate at Baylor College of Medicine
- Developed AI models using DNA sequences, biophysical properties, and CG content to predict off-target effects in CRISPR-Cas9 gene editing, improving precision and safety in human cell lines.

PROJECTS

IdeasNests (ideanests.com) Launched - October 2023
- Developed 'IdeaNests,' an AI-driven web platform using Python, Django, and NLP, to empower community decision-making by analyzing and summarizing local ideas for actionable insights. Launched successfully in two towns, fostering inclusive engagement and innovation.

DeepTumorDetect: Enhancing Brain MRI Analysis using ResNet50 and U-Net Models September 2024
- Implemented a ResNet50 classifier to detect tumors in MRI images and a U-Net model for precise tumor localization in brain scans, enhancing diagnostic accuracy.

News Headline-Based Sentiment Analysis for Stock Market Prediction July 2022
- Utilized NLP and ML models (Logistic Regression, Random Forest) for stock prediction based on news headlines.

EXPERIENCE

Applied AI Consulting - *Intern* May 2024 - August 2025
- Design and develop an agentic AI system for automating QA tasks. Enabling seamless communication between AI agents, specialized in different domains, for improved efficiency and accuracy.

FIRST Robotics Team 2064 - *Programming Captain* August 2021 - June 2025
- Led 20+ team members as Programming Captain; organized and ran 6 coding workshops to upskill peers in Java/WPILib. Introduced logging and ML-based automation, improving debugging efficiency and robot performance, contributing to the team's advancement to State Championships.

TeensTutorsTeens - *CT Chapter President* March 2021 - June 2025
- Expanded outreach and established educational partnerships for Teens Tutors Teens, a 501(c)(3) nonprofit, enhancing tutoring services and support for students' academic growth.

AWARDS/RECOGNITIONS

CIAC Scholar Athlete, Cyber Start Scholar with Honors: Top 2% Nationwide, Destination Imagination: Service Learning Challenge - 1st Place States - Nationals Qualifier, Grip Tape Award - garnering $500 for innovative project proposal, 2x Regional Debate Winner (Connecticut Debate Association), Rafa Nadal Tennis Academy Values Award winner, Scholar Leader Award - Academic Excellence and Leadership