Jeremy Huang

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Education

University of Colorado - Boulder — Boulder, CO

B.S. in Computer Science, B.A in Mathematics — *Aug 2022 - May 2026*

- GPA: 4.0/4.0 | Organizations: Tau Beta Pi, Engineering Honors Program, CU Robotics, Quantum Scholars
- Relevant Coursework: Artificial Intelligence, Data Science, Data Structures & Algorithms, Operations Research, Numerical Analysis, Multivariable Calculus, Linear Algebra, Differential Equations, Probability & Statistics

Experience

Software Engineering Intern — Apr. 2024 – Present

Bureau of Reclamation — *Lakewood, CO*

- Developed a machine learning algorithm for detecting cracks in 300GB of concrete imagery with 87% in mIOU accuracy using image segmentation techniques and the U-Net/CNN architecture in TensorFlow and PyTorch
- Implemented various Loss functions such as Tversky, Focal, and Jaccard to optimize the model's accuracy, resulting in a 70% increase in mIOU accuracy
- Automated data pipeline from Enterprise Asset Registry to SQL Server DB, processing 30k+ assets
- Reduced 5+ hrs/week of manual downloads to 3 minutes (98% improvement) and ensured data accuracy
- Designed data cleaning algorithms and established robust data schema in SQL DB. Improved data quality, facilitated efficient data analysis, ensured scalability for future projects

Undergraduate Researcher — Aug. 2023 – Present

CU Boulder Computer Science Department (BAIC Lab) — *Boulder, CO*

- Researching Generative AI accessibility in marginalized communities to improve the usability of computer systems and AI models for individuals with limited access to technology
- Coordinated workshops in Africa that teach individuals to use AI models to generate creative outputs

Co-Founder — Oct. 2023 – Present

Edvise Technologies LLC — *Highlands Ranch, CO*

- Built and launched an MVP course planning tool using JavaScript/React framework and Google Cloud services (Realtime Database, Cloud Firestore, Cloud Functions).
- Architected and implemented the backend infrastructure, ensuring seamless integration between front-end components and Google Cloud services for real-time data synchronization and scalability.

Software Engineer — Aug. 2023 – May 2024

CU Hyperloop — *Boulder, CO*

- Developed a MATLAB and Python program to compute and implement a spline path for error correction
- Improved the Tunnel Boring Machine path efficiency by more than 20% in terms of distance
- Wrote State Machines in Python regulating the machine's propulsion, hexapod, and tunnel support sub-systems

Mathcounts Head Coach — Aug. 2020 – May 2023

Stargate Middle School — *Thornton, CO*

- Restarted and took over the Mathcounts team after the former coach retired
- Organized weekly practices and problems, communicated with parents about upcoming competitions
- Won the North Metro Chapter Competition all three years (2021 - 2023), with the most State Qualifiers (10) in Colorado in 2022 and 8 State Qualifiers in 2023

Technical Skills

Python (Pandas, NumPy, TensorFlow, PyTorch), C/C++, Java, Javascript (React.js, Node.js), CSS, HTML, Git, SQL

Honors and Awards

- David Pratto Scholarship Recipient (Top undergraduate Mathematics student) — Aug. 2024
- 4x AIME Qualifier (Top 2.5-5% of AMC10/12 test takers are qualifiers) — Mar. 2020 - Mar. 2023
- 2x 1st Place American Regions Mathematics League (ARML) Team Member — Jun. 2021 - Jun. 2023
- 1st Place (Perfect Score), University of Northern Colorado Math Competition — Feb. 2022
- 2x USNCO Nationals Qualifier, Top Scorer in Colorado in 2022 — Apr. 2021 - Apr. 2022
- National Merit Scholar — Feb. 2023