

Shrey Joshi

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EDUCATION

- **University of Texas at Dallas** Richardson, TX
B.S. Computer Science: CS² Honors, National Merit & Collegium V Scholar Expected Grad: Winter 2024
 - **Relevant Coursework:** DS/Algo, C/C++ UNIX Programming, Computer Architecture, Linear Algebra
 - **Clubs & Activities:** Blackstone LaunchPad, AI Society, Association for Computing Machinery

EXPERIENCE

- **Boston University** Boston, MA
ML Research Intern June 2022 - Aug 2022
 - Worked with Dr. Woodcock and NASA SERVIR Applied Science Team to propose new transformer and LSTM time-series models to estimate crop yield in West Africa using Landsat satellite data
- **University of Texas at Austin [Github] [Poster] [Publication]** Remote
ML Researcher Aug 2020 - April 2022
 - Processed 250GB of global geophysical & climate data with Random Forests for landslide analytics/risk analysis
 - Developed & documented multi-threaded Python API to process raw sensor-acquired geologic data into Digital Elevation Models (DEMs) and lithological shapefiles (API now used throughout UT geoscience department)
 - Presented & published research paper at the 2021 IEEE MIT URTC Conference
 - Acquired \$10,000 in research funding from NatGeo and US Agency for International Development (USAID)
- **Association for Young Scientists & Innovators (aysi.org)** Dallas, TX
Summer Camp Director June 2020 - July 2022
 - Created new AI & CS curriculum and directed 2022 summer programming camp (200+ MS/HS students)
 - Delivered lectures on science research and provided 1-on-1 mentorship for 2021 Science Fair Academy
- **Grassroots Democrats HQ** Remote
Full Stack Developer June 2020 - Apr 2021
 - Sole full-stack developer for organization of 450 volunteers (grassrootsdems.org)
 - Created portal system using Django, React, & Firestore to automate the distribution of 600,000 postcards, scripts & addresses to volunteers around the USA, saving hundreds of hours in manual emailing
- **JusticeCoin [Github]** Remote
Dev Team Lead June 2020 - Jan 2021
 - Turns your computer's processing power into charitable donations using decentralized cryptomining
 - Lead developer on team of 2 others building website and native desktop app
 - Led to \$2,200 donated through mining, grants, and competitions

NOTABLE PROJECTS

- **This Photograph Does Not Exist [Demo]** AI-generated landscape photography using GANs (Generative Adversarial Networks) Used: PyTorch, JavaScript
- **BirdWatch [Github]** Mobile app that uses a ResNet CNN to identify species of birds and collects image/location data in a dashboard. Used: Android Studio, TF/Keras, React, Firebase RTDB
- **Chess Engine [Github] [Demo]** A simple chess engine using minimax and alpha-beta pruning. Used: JavaScript
- **RetnoScan [Github]** Mobile app that uses transfer learning with a MobileNet CNN to classify eye fundus abnormalities (Diabetic Retinopathy). Used: Android Studio, TF/Keras

SELECTED HONORS AND AWARDS

- **Regeneron ISEF:** 2021 Best-of-Category (Top 26 of 7M); 3x Grand/Special awards; Total \$10,000 won
- **IEEE MIT URTC:** Presented & published computational landslide analytics paper at 2021 virtual conference
- **HackRice:** 2nd overall of 283 HS/undergrad teams + Data2Knowledge Labs Challenge winner; \$3000 cumulative in prizes (4 electric scooters & Apple Airpod Pros)

SKILLS

- **Languages:** Python, Java, C# Objective C, C++, HTML/CSS, JavaScript, Rust, Bash, L^AT_EX, Swift, SQL
- **Tools/Libraries:** PyTorch, TensorFlow/Keras, React, Node, Flask, Jupyter, EarthEngine, Unity, Firebase, Git, R
- **Miscellaneous:** Unix, Excel