

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: 2024*
 - **Relevant Coursework:** Data Structures & Algorithms, C/C++ in UNIX, Computer Arch, Operating Systems
 - **Clubs & Activities:** Blackstone LaunchPad, Artificial Intelligence Society, Association for Computing Machinery

EXPERIENCE

- **Boston University** Boston, MA
Machine Learning Research Intern *June 2022 - Aug 2022*
 - Worked with NASA SERVIR applied science team to propose transformer (computer vision) and LSTM (time-series) models for estimating crop yield in West Africa using multi-spectral satellite (Landsat8) data
 - Used: Python, PyTorch, Matlab, Scikit-Learn, AWS EC2 P3, Docker
- **University of Texas at Austin [Github] [Poster] [Publication]** Remote
Machine Learning Researcher *Aug 2020 - April 2022*
 - Built a system for ML-driven landslide analytics & prediction based on real-time multi-spectral satellite data, processing 350GB+ of global geophysical data using PCA, Random Forests, Support Vector Machines, and LSTMs.
 - 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)
 - Used: Python, PyTorch, GCP, Docker
- **Grassroots Democrats HQ** Remote
Full Stack Developer *June 2020 - Apr 2021*
 - Sole full-stack developer for organization of 450 volunteers (grassrootsdems.org)
 - Clustered voter personas from openFEC API historical campaign data to intelligently distribute 600,000 postcards, scripts, and addresses to registered volunteers around the USA, savings hundreds of hours of manual emailing.
 - Built portal system for volunteer hour logging and automated texting system for daily shift reminders
 - Used: Scikit-Learn, Django, React, MongoDB, Node

PROJECTS

- **RetnoScan [Github]**
 - Transfer learning + MobileNet CNN to detect eye fundus abnormalities from your smartphone camera
 - Used: Android Studio, TensorFlow/Keras
- **BirdWatch [Github]**
 - A mobile app that uses a ResNet CNN to identify species of birds and collects image/location data in a dashboard
 - Used: Android Studio, TensorFlow/Keras, React, Firebase RTDB
- **This Photograph Does Not Exist [Demo]**
 - AI-generated landscape photography using Generative Adversarial Networks (CycleGAN)
 - Used: PyTorch, JavaScript
- **Chess Engine [Github] [Demo]**
 - A simple JavaScript chess engine employing minimax and alpha-beta pruning

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, JIRA