Dan Tran

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EDUCATION

University of California Merced December 2019

- Bachelor of Science in Computer Science and Engineering (GPA 3.66)

EXPERIENCE

Geospatial Research Assistant, VICE Lab December 2018 - Present

- Developing geospatial analysis solutions to complex hydrological and agricultural challenges by parsing and analyzing satellite and UAV imagery via Google Earth Engine.
- Focusing on the state of California dealing with datasets containing millions of data points.
- Streamlining processes via Machine Learning and developing multiple models to estimate fauna visitation to stock ponds.
- Utilizing TensorFlow to estimate sediment displacement from landslides, to understand how natural disasters affect particulate concentrations in watersheds.

Computational Research Assistant, AI Summer May 2018 - August 2018

- Researched how to interpret gaps in stitched UAV imagery and transforming identified imagery using OpenCV with planar homography principles.
- Constructed a custom data set using PIL used to simulate gaps in panoramic images.
- Achieved 97% accuracy on the CIFAR100 data set recognizing objects with a sequential Convolutional Neural Network using the Keras API.

Mobile App Development Intern, *Future First* February 2018 - May 2018

- Created a mobile application to help disadvantaged youth connect with potential mentors to empower them in their pursuit of a professional career via Android Studio and Java
- Pitched app at the Center of Information Technology Research in the Interest of Society (CITRIS) Mobile App Challenge, winning an honorable mention for the application's unique social impact.

Data Analyst Intern @ Pulse Jet Project, AAIA July 2017 - May 2018

- Architected sensor array to collect data from a pulse jet using an Arduino microprocessor and heat and force sensors. Collected and stored sensor outputs into a CSV file for analysis via *C++.*

PROJECTS

BitNaughts December 2018 - Present

- Developing an educational sci-fi video game focused on teaching programming and computer science concepts utilizing Unity3D and C# with an ASP.NET backend.
- Designed the galaxy generation using Object-Oriented principles.

ChemisTRY January 2019

- Developed a chemistry AR application focused on bringing 3D models and reactions to the classroom utilizing AR.js and AWS.
- Design the 3D models in AR.js based on input from our node.js server.

EcoHacks Data Visualizer (EcoHack 2018 Second Place) November 2018

- Developed a SQL data visualization tool using C# and Unity, gamifying sustainability awareness.
- Designed application wireframes and implemented them within a twelve hour time constraint.
- Dynamically scaled graphs to emphasize water usage and conservation efforts in coordination with the UC Merced Department of Sustainability.

LANGUAGES

C++
C
C#
Python
HTML
CSS
JavaScript

SOFTWARE

Tensorflow
Keras
Google Earth Engine (GEE)
Google Cloud Platform (GCP)
Unity3D
OpenGL
GLUT
Arduino IDE

APIs/LIBRARIES

Beautiful Soup
NumPy
Python Image Library (PIL)

COURSES

Algorithms
Networks
Computer Vision
Data Structures
Object Oriented

AWARDS

ValleyHacks 2019
- Third Overall
- First Place Jr

EcoHacks 2018
- Second Place

CITRIS MAC
- Semi-Finalist