Dhanuj Mount Gandikota

dhanujg@umich.edu| dhanujmg@gmail.com | 734 730 3226 | Ann Arbor, MI 48104
Personal Website/Portfolio: https://dhanujg.github.io/
LinkedIn: https://www.linkedin.com/in/DhanujG/

EDUCATION

The University of Michigan, Ann Arbor, MI   *April 2021*
B.S in [Data Science]; [Computer Science]; and [Ecology & Evolutionary Biology]   **3 Independent B.S. Degrees*

Courses Taken
Graduate   (500+):   Machine Learning , Computational Data Science
Undergrad (400+):   Autonomous Robotics, Data Mining , Computer Vision , Intr. Machine Learning , Applied
Regression Analysis, Database Management Systems , Data Structures & Algorithms , Linear Algebra

EXPERIENCE

Computational Ecology, Evolution and Biology Lab
Machine Learning Development Student Research   *Nov 2019 – Present*

- Encoded Density Clustering ML Model in R selected with DBCV analysis in Python to identify coexistence in competing species contradicting competitive exclusion with 92% confidence. Model architectures designed from ML research.
- Created R package in Python, C++ for Bio-Ecologists to structure trait data and perform Biological ML Clustering Analysis
- Operate as an interdisciplinary reference within lab to explain and analyze machine learning and data analysis research.

Michigan Eco Data
Project Director & Founder   *Sep 2019 – Present*

- Founded org for interdisciplinary exploration in data science, software engineering, and environmental conservation
- Execution of consumer product and effective executive board communication awarded organization 2000$ sponsorship per semester from Michigan Institute of Data Science. Currently managing 4 project teams with 25+ active members.

GHD: Engineering, Architectural, and Environmental Consulting
Data Science Intern   *June – August 2019*

- Structured collected/ scraped ARCGIS in Python, C with facility data and performed regression and linear neural network analysis to determine optimal PFAS testing sites with reduction in operating costs.
- Created custom field forms and designed database architecture to pipeline response data into auto-populated EPA Audit Forms. Automation pipeline transformed field form collection data into 5000+ Audit cells previously filled manually.

Michigan Medicine Computer Aided Diagnosis Lab   (*Primary Author of 2 Publications)
Machine Learning & Computer Vision Student Research   *Jan 2017 – April 2019*

- Implemented Back Propagated Neural Networks, LDA, SVM and RF models in C++ validated with ROC analysis to produce a bladder cancer classification accuracy of +80%. Executed Feature Extraction on Bladder CTU Scans to isolate key features
- Invited to and performed Poster (2018) and Oral (2019) Presentations in the National SPIE Conferences to other Researchers

INDEPENDENT PROJECTS   *-More Projects also located on GitHub*

Deep Learning to Estimate Forest Density from Drone Footage
- Standardized Aerial Forest Drone Images scraped from internet and extracted Density Maps and Forest Tree Segmentations
- Constructed a Neural Network in Python based on recent 2017 crowd CVPR research resulting in 80% prediction accuracy

Heatmap Visualization of Michigan Chemical Contamination for Core Consumer Product
- Structured 3,000,000+ Public EPA contamination data points to isolate Michigan Locations above Safety Levels
- Built a dynamic web dashboard of heatmap visualizations enabling users to visualize contamination values in their locality.

Machine Learning Analysis to Predict Countries Happiness through Non-Demographic data
- Scraped 130 countries geographic, political, and organizational data, structured with Time Series Forecasting in R, Python
- Developed suite of regression and classification models resulting in a ~90% prediction rate from variable selected data

TECHNICAL SKILLS

Programming Languages: (Proficient) - C++/C, Python [PyTorch, TensorFlow, NumPy, Pandas] , SQL , R , MATLAB
(Familiar) - Java , HTML , CSS , Cuda
Tools and Frameworks: Linux , Hadoop , Git , MS Azure -Machine Learning , AWS-Sagemaker, Tableau , Jupyter , SAP-HANA

EXTRACURRICULARS

DJs A Cappella - *Member & Business Manager*   *Jan 2017- Present*
- Placed 1st at ICCA Midwest Quarterfinal and personally awarded Outstanding Vocal Percussionist
- Implemented outreach techniques and initiation of new fundraising events to end with a 25% increase in revenue