CS229

CS 229 projects, Spring 2021 edition

There was no live poster presentation because of the pandemic, so producing a poster was completely optional (and not worth bonus credit).

Best Project Award

(*in no particular order*)

(Title Redacted)
Nic Becker, Brett Larsen, Stanislav Fort
[Report Redacted]

(Title Redacted)
Ryan Andrew Chi, Patrick Yuhao Liu, Nathan Gyoohyun Kim
[Report Redacted]

Open-Ended Generative Commonsense Question Answering with Knowledge Graph-enhanced Language Models
Hanson Hanxiang Lu
[report]

Predicting the Adverse Events Following Receipt of mRNA Based COVID 19 Vaccines
Xiaojuan Liu, Yirong Yang
[report]

All project posters and reports

(*in no particular order*)

Towards Feature Sparsity in Large Models: Applications of LassoNet in Image Classification
Jonathan Yi Tseng, Pratham Soni, William Zhang
[report]

Machine Learning for Traffic Flow Prediction in Urban Areas

Genggeng Zhou, Yulin Huang

[report]

An Interpretable Depression Machine Learning Classifier on Brain Imaging Data

Tayden Li

[report]

Optimizing Stock Trading Strategy with Reinforcement Learning

Bradford J. Lin, Wilson Wenda Liang, Mai Lan Nguyen

[report]

Applying Deep Reinforcement Learning to Control a Rocket Vehicle in Hover using Thrust Vectoring

Christopher Lu Osgood

[report]

Solving the Rubik's Cube with Deep Reinforcement Learning Using Multi-Headed Models

Kiyohiro Nakayama, Hanson H Hao, WenXin Dong

[report]

Text-Based Prediction of Book Review Popularity

Bridget Daly

[report]

Detection of Hand Drawn Circuit Schematic Symbols

Aditi Kumar, Riyaz Adnan Merchant

[report]

Dyadic Gender Composition and Task Classification Using fNIRS Hyperscanning Data

Liam Anthony Kruse

[report]

Imitation Learning in Macroeconomics: To Save or not to Save?

Sikata Bela Sengupta, Rafael Xavier Esteves

[report]

Deep Brain Inference from Cortical Functional Magnetic Resonance Imaging Measurements

Marc Schlichting

[report]

Machine-learning based prediction of COVID-19 and the effectiveness of interventions

Yunjae Hwang, HEEGWANG ROH

[report]

Automatic transformation from animated face image to real human face image

Ryota Eki

[report]

Quantitative Trading With Machine Learning

Rene Marco Glawion

[report] [poster]

Multiclass Classification of Fetal Health using Cardiotocogram Data

JR S Ereyi, Marc Huo

[report]

Wildfire Prediction Through Lvie Fuel Moisture Content Maps

Irene Alisjahbana

[report]

The BanditPAM Algorithm: Getting to Production

Ben Charles Hora, Chung Ching Cheung

[report]

Detecting and predicting earthquake ground motion directionality patterns

Rodrigo Ivan Silva Lopez, Alan John Poulos

[report]

Using Unsupervised Learning to build a binary classifier graph for multiclassification

Gabriel Spil

[report]

Predictive Risk for Efficient Black-Box Validation of Autonomous Vehicles

Robert John Moss

[report]

Applications of Quantum Computing in Machine Learning

Sasha Lazarevic

[report]

Using Neural Network for Security Attacks Detection

Sotiris Papasotiriou

[report]

Data Driven Cloth for Interactive Applications

Kangrui Xue

[report]

Music Genre Classification

Albert An Cheng Pun, Kamilla Nazirkhanova

[report]

Predicting Hit Songs Using Repeated Chorus

Eric Liu

[report]

Relevance of classical models in the paradigm of convolution neural networks

Pujan Aloke Biswas, Hefu Pan

[report]

Application of Deep Reinforcement Learning in Algorithmic Trading

Hieu Trung Le

[report]

Neural Network Training under Input-Output Set Constraints using Reachability and Differentiable Collision Checking

Adam Dai, Derek Cutler Knowles

[report]

Translating Chemical Skeletal Formula Images into InChI Annotations

Lainey Yifei Wang

[report]

Predicting myocardial infarction risk using supervised and unsupervised machine learning methods

Katie Shi, Katelyn Bechler, Vivian Ho

[report]

Application of Machine Learning Methods to Evaluate Collectable Merchandise

Xiaotian Lu

[report]

ChePT-2: Advanding the Application of Deep Neural Transformer Models to Chess Move Prediction and Self-Commentary

Harry Mellsop, Colton Orion Swingle, Collin Schlager

[report]

Trolls, Haters, or Teammates: Classifying Sentiment in the Langeuage of PvP Game Communications

Melinda Zhu, Thomas Haoze Yang, Kevin Walter Borst

[report]

Sentiment Analysis of Chinese Microblog Posts on Attitude Toward Vaccination Since Outbreak of Covid 19

Sylvia Yuan, Yifei He, Zhaoqiang Bai

[report]

2020 Summer Olympic Games Predictions

Brian Christopher Dobkowski

[report]

Predicting acceptance of personal loans

AJ James Rossman, Conor Reardon Casey

[report]

Mole or Melanoma: An Exploration of Melanoma Classification

Tom Cole Welch, Drew Wadsworth, Sophie Jasmin Parsa

[report]

Twitter Sentiment Analysis for Bitcoin Price Prediction

Sara Abdali, Ben Francis Hoskins

[report]

Position-independent Human Activity Recognition using Smartphone Sensors Via Machine Learning

Zhe Yan

[report]

Crowdfunding: Predicting Kickstarter Project Success

Benjamin Henly Wittenbrink, Sauren Khosla

[report]

Estimate Photographic Settings from Images

Jun Wang, Jenny Hu

[report]

Land Use prediction in the Chesapeake Bay Watershead

Daniel Morton

[report]

Predicting Mortgage Backed Securities Prepayment Using Machine Learning Methods

John Boccio, Chong Guo, Christopher Patrick Cameron

[report]

Approximate Data Deletion via Weight Pruning

Sophia Sanchez, Lucas E Orts, Will Song

[report]

Automated Image Colorization

Hanzhao Lin, Rafael Cardoso Ferreira

[report] [poster]

Prediction of Invasive ICU Procedures From Electronic Health Record Data

Jiwoo Lee, Keaton Ollech, Alex Kern

[report]

Categorizing news articles on political bias

Dylan Marshall Crain, Yagmur Erhan

[report]

Unified Transformer for Multi modal few shot classification

Fang QIN, Vincent Li

[report]

Interpreting Sign Language

Amita Gondi, Mustafa Ahmed Khan

[report]

Asynchronous Reinforcement Learning Applied to Tetris

Spencer Daniel Graves

[report]

Fake News Detection With Multimodal Machine Learning

Chuanqi Chen, Danni Ma, Kaijun Feng

[report] [poster]

Understanding key predictive covariates for maternal mortality in Nigeria

Sameer Sundrani, Cora Isabel Wendlandt, Amy Yue Zhang

[report]

Travel Landmark Image Classification

Michelle Xing, Trinity Gaw Donohugh, Hanna Yip

[report]

Reinforcement Learning on Spades

Theo Daniel Culhane

[report]

Predicting Survivability of High Grade Serous Ovarian Cancer

Anthony Tzen, Asha Mehta

[report]

Image Classification of Pneumonia from Chest X Rays

Jasper den Otter, Alexander Lerner, Oscar O'Rahilly

[report]

Using Tactile Sensors to Learn a Manipulation Task

Mason T Llewellyn

[report]

Learning Dynamic Models From Data

Jason Anderson, Alexander Maynard

[report]

Application of Machine Learning Methods to Predict the Level of Building Damage in the Nepal Earthquake

Yitian Liang

[report]

Fungal Identification from Metagenomic Sequence Data

Charlie Curnin, Nicholas Anthony Midler

[report]

Predicting the in game events in the League of Legends Game

Eun Jee Sung

[report]

Predicting Collegiate Track and Field Performances

Erika Paige Malaspina, Ellie Ugne Talius

[report]

Demand Forecasting with Machine Learning Techniques in Supply Chain Management

Runqiu Shi, Boshi Huang

[report]

Predicting Cell Types and Disease Status in Acute Myeloid Leukemia

Raymond Yin, Vardhaan Ambati

[report]

RGBD Object Tracking for Visual Servoing

Rita Tlemcani

[report]

Using satellite imagery to predict wildfires

Rahul Srivastava, Andrew Tremain Lazar

[report]

A Harmonious Approach to Algorithmic Composition

Nicholas Anthony Graziano

[report]

Learning to Flock with Policy Gradients

Mehmet Bilgehan Bezcioglu

[report]

COVID 19 Cough Detection

Liyu Tan, Dagger Chen, Ryan Pan

[report]

Story Illustration using Generative Adverarial Networks (GANs)

Priscilla Lui, Grace Kim

[report]

Exploring Cooperative Ability of AI Through Hanabi

Matthew A Riedman

[report]

Clustering Natural Wines

Joseph Anthony Matan

[report]

Recognizing Ringworm in Canis lupis familiaris or Felis catus

Sophia Luisa Andrikopoulos, Eden Grown-Haeberli

[report]

Hopper: Reinforcement Learning Based Control on a Wheeled Bipedal Robot

Aaron Zachary Schultz, Parthiv Nandakumar Krishna

[report]

Pathway Scores: Feature Engineering for Age Prediction from Gene Expression Data

Rishabh Raj Kapoor, Yash Pershad

[report]

Towards Localizing Nomadic Pastoralist Settlements from Remote Sensing Data: Proposal of a Novel Dataset of Settlements in Nyangatom, Ethiopia and Exploration of Deep Learning Classification Methods

Benjamin Cheung Liu

[report]

Rewriting Children's Stories for Different Reading Levels

Feiyang Liu, Bochen Zhang, Yiqun Tian

[report]

The Automatic Driving of TBM

JINPU CAO

[report]

FPGA Board State Detection: SVM versus CNN

Misha Orduna Baitemirova

[report]

**Generating Photorealistic 3D Models From Limited
Data**

Eric Ryan Chan

[report]

**Predicting market volatility and building short term
trading strategies using data from Reddit's
WallStreetBets**

Abhishek Raghunathan, Shashank Rammoorthy, Kiara Nirghin

[report]

**Is Pitchfork Out of Pitch? Investigating Bias in
Pitchfork Album Reviews**

Kimberly Kathleen Batdorf, Colin Hall Kalicki, Ayush Pandit

[report]

**ML-Based Collaborative Filtering for Cross-Cultural
Music Recommendations**

Stephan Sharkov, Yuzu Marie-Christine Ido, Eunice Yang

[report]

A Foray into GANs

Madeleine Yip, Kevin Tan

[report]

**Predicting Real GDP Growth Using Regulatory and
Political Indicators**

Rachael Liu Wang, Andrew Hugh Conkey

[report]

**Applying machine learning algorithms to identify
and classify brain scans as having a risk of
Alzheimer's disease**

Ricky Anthony Parada, Ian Yue Han Ng

[report]

GrES: Group Evolutionary Strategies for Sample Efficient Direct Policy Learning

Coen R Armstrong, Diego Jasson

[report]

Implementing Fairness Constraints in Credit Rating Prediction

Jodie Anna Bhattacharya, Arthur Lee, Andrew Michael Semenza

[report]

Machine Learning for Pinnacle Matchmaking in Destiny 2

Garrick Domalanta Fernandez

[report]

Predicting Power Output of High Efficiency PVs Using Sky Imaging

Sarah Catherine Spaugh

[report]

Comparing Machine Learning Techniques on the Task of Fake News Detection

Yining Zhu, Qianli Song

[report]

Multi-layer perceptron Neural Networks and Time Series Forecasting in Portfolio Opimization

Tiffany Zhao, Alina Chou, Edgar Miguel Roman

[report]

Using Machine Learning Methods to Classify urban Heat Islands

Jennifer Jing Xu, Susan Chen Chen

[report]

Using Q-Learning to Personalize Pedagogical Policies for Addition Problems

Takara Everest Truong, Cortney Curtis Weintz, Danyating Shen

[report] [poster]

EnJa: a Reading Level Appropirate Japanese Reading Recommender

Hanna Yongeun Lee, Issac Bevers

[report]

Malware Classifier

Joe Cronin Allen

[report]

Classification of Invalid Page Content for Topic Modeling Pipelines of Web Browsing Data

Natalie Marie Cygan

[report]

Seeking Feature Sparsity in Collaborative Filtering with LassoNet

William Scot Armstrong

[report]

Classification of Horror Stories from Reddit

Sohit Gatiganti, Chris Chankyo Kim, Dean Zhou

[report]

Markets for Consumer Data

Ayush Kanodia, Lina Lukyantseva

[report]

A comparative study of reinforcement learning techniques for analog electronic design automation

Kannan Sankaragomathi, Qingwei Zeng, Huafan Cai

[report]

Embeddings for Classifying Racist Tweets

Raymond Ye Lee, Cindy Xuan

[report]

Adaptive Prediction Sets with Class Conditional Coverage

Alex Socrates Derhacobian, John Taro Guibas, Linden Sky Li, Bharath Raj Namboothiry

[report] [poster]

Endpoint Telemetry for Malware Detection

Siddhartha Jagannath

[report]

Multi-Intrumental Genre Transfer Using CycleGan

Justin Young, Mac Broido, Emmanuel Ntse Ayumba

[report]

Mobile Money SMS Fraud Detection

Josh Nkoy, Arafat Mohammed

[report]

Encryption and Machine Learning: How Classification May Be Impacted by Encryption

Meg Richey, Yosheb M Getachew, Joshua Mosa Shongwe

[report]

Predicting Bazel Build Times Using Machine Learning

Muhammad Umar Nadeem Sarah Raza

[report]

Machine Learning Classification of Bacterial vs Fungal Keratitis from Photographs

Kevin Titat Supakkul, Kimmy Chang, Ryan Mason Beauchamp

[report]

Inferring Pitch and Roll using Accelerometer and its applications

Saravana Kumar Rathinam

[report]

LAMANAS: Loss Agnostic and Model Agnostic Meta Neural architecture Search for Few-Shot Learning

Sergio Charles, Gordon Chi, Gil Kornberg

[report]

CS229 Final Project

Bryn Matheson Hughes

[report]

Evaluating the textbugger NLP Attack on a State-of-the-Art Sentiment Classification Model

Seiji Eicher

[report]

CS229 Final Project

Sally Egan, Huong Thien Nguyen

[report]

Towards a Machine Learning Based Algorithm for Performing Low Brightness Photometry using Star Shape

Alec Milton Lessing

[report]