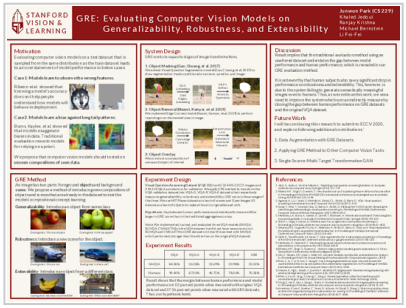
CS229

CS 229 projects, Fall 2019 edition

Best Poster Award projects

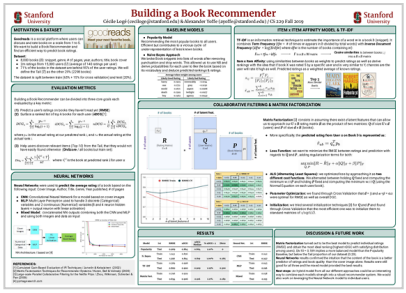


GRE: Evaluating Computer Vision Models on Generalizablity Robustness and Extensibility

Computer Vision

Junwon Park

[report] [poster]

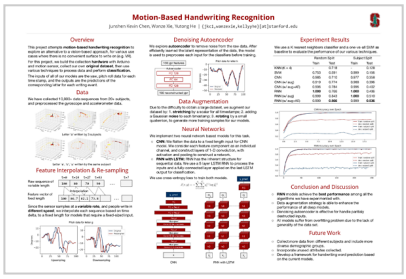


Building the Optimal Book Recommender and measuring the role of Book Covers in predicting user ratings

General Machine Learning

Alexander Yoffe, Cecile Loge

[report] [poster]



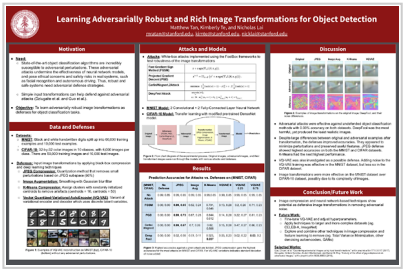
Motion Based Handwriting Recognition

Athletics & Sensing Devices

Kelly He, Kevin CHEN, Wanze Xie

[report] [poster]

All project posters and reports

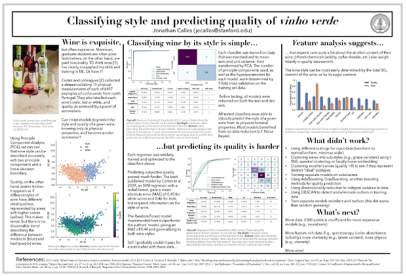


Learning Adversarially Robust and Rich Image Transformation for Object Classification

Computer Vision

Nicholas Lai, Kimberly Alexis Te, Matthew Ang Tan

[report] [poster]

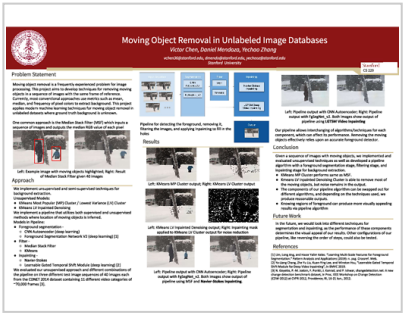


Predicting Style And Quality of Vinho Verde from its Physical Properties

Physical Sciences

Jonathan Elias Calles

[report] [poster]

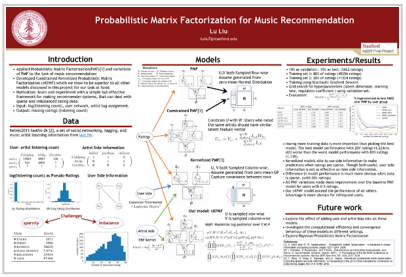


Moving Object Removal in Unlabeled Image Databases

Computer Vision

Victor Chen, Daniel Marcos Mendoza, Yechao Zhang

[report] [poster]

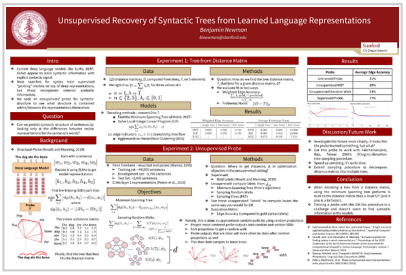


Probabilistic Matrix Factorization for Music Recommendation

General Machine Learning

Lu Liu

[report] [poster]

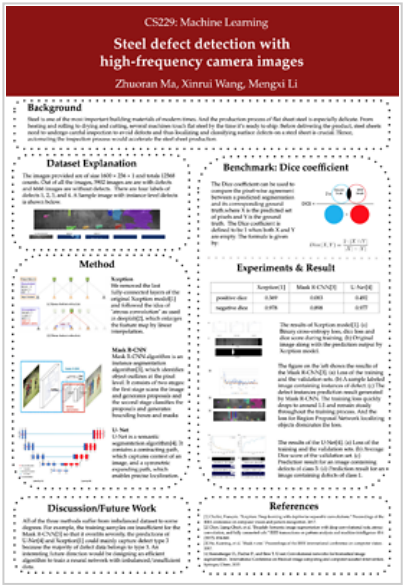


Unsupervised Recovery of Tree Metrics from Learned LanguageRepresentations

Natural Language

Benjamin Louis Newman

[report] [poster]

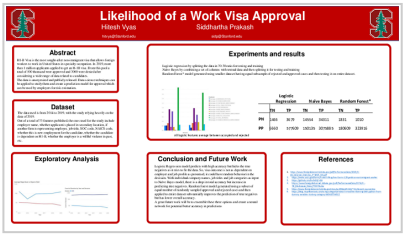


Steel Defect Detection with High Frequency Camera Images

Computer Vision

Xinrui Wang, Zhuoran Ma, Mengxi Li

[report] [poster]

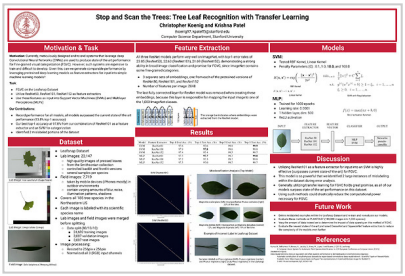


Likelihood of a Work Visa Approval

General Machine Learning

Siddhartha Prakash, Hitesh Vyas

[report] [poster]

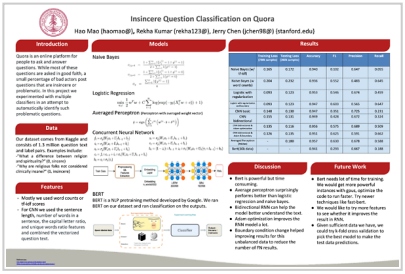


Stop and Scan the Trees: Tree Leaf Recognition with Transfer Learning

Computer Vision

Krishna Kartik Patel, Chris Allen Koenig

[report] [poster]

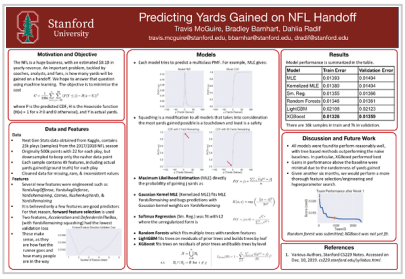


Classification of Insincere Questions on Quora

Natural Language

Jerry Chen, Hao Mao, Rekha Kumar

[report] [poster]

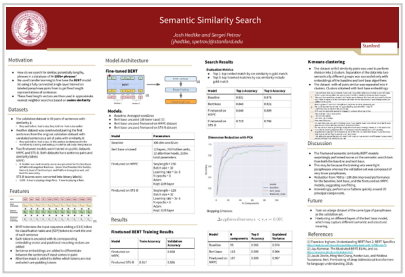


Predicting Yards Gained on NFL Handoff

Athletics & Sensing Devices

Bradley Stephen Barnhart, Travis McGuire, Dahlia Radif

[report] [poster]

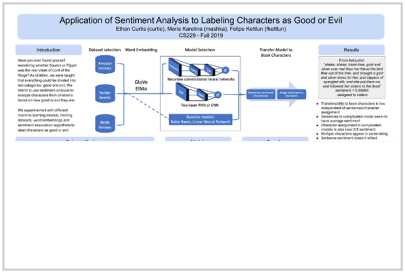


Semantic Similarity Search

Natural Language

Josh Hedtke, Sergei Petrov

[report] [poster]

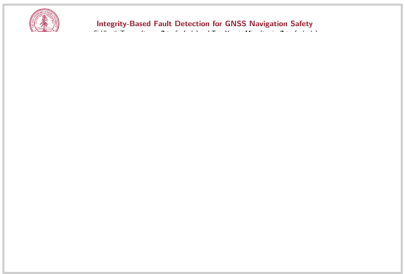


Application of Sentiment Analysis for Labelling Charaters Good or Evil

Natural Language

Ethan Robert Curtis, Masha Karelina, Felipe Kettlun

[report] [poster]



Integrity-Based Fault Detection for GNSS Navigation Safety

General Machine Learning

Siddharth Tanwar, Tara Yasmin Mina

[report] [poster]

Malicious Agent Classification In Multi-Agent Formation Control

General Machine Learning

William Chong

[report] [poster]

Natural Language

Nagarjuna Rao Venkata Sai Chakka, Michael Caine Lanier, Sibi Shanmugaraj

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Machine Learning for predicting sediment particle size

Physical Sciences

Galen Charles Egan

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Predicting Movie Ratings with Multimodal Data

General Machine Learning

Ruoyun Ma, Yichen Yang, Min Haeng Cho

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Real-estate price prediction for King County region

Finance & Commerce

Bharat Chandramouli

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News-oriented Stock Price Trend Prediction

Finance & Commerce

Xinwei He, Jiachen Ge, Zecheng Zhang

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Vowel formants predict place of articulation of following consonant in Kannada: Evidence for the autosegmental theory of phonology

Audio & Music

Praveen Nareshkumar Pallegar

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Machine Learning Based Pallets Detection and Tracking in AGVs

Computer Vision

Jie Xiang, James Han, Shengchang Zhang

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Predicting the Response of Triple-Negative Breast Cancer Patients to Neoadjuvant Chemotherapy using Unstructured Text

Life Sciences

Bryan Sanghyuk Kim, Eric Tetsuo Matsumoto, Andrew Warren Sharp

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ShipNet: A Fishing Vessel DatasetChallenges and Opportunities

- General Machine Learning

Gregory John Weaver

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Learning to play SLITHER.IO with deep reinforcement learning

- Theory & Reinforcement Learning

Zhanpei Fang, Joan Creus-Costa

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Using Neural Networks to Learn Quadruped Leg Models

- General Machine Learning

Tarun Antony Punnoose

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Predicting Ozone Nonattainment in US Counties with Supervised Learning

- Physical Sciences

Max Sutton

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Predicting Eruptive Events at Volcanoes from Earthquake Data

- Physical Sciences

Ben Mullet, Ankush Singh, Ying Qi Wong

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A Privacy Preserved Image-to-Image Translation Model in MRI: Distributed Learning of WGANs

- Computer Vision

Tolga Ergen, Berivan Isik, Batu Mehmet Ozturkler

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FacePaint: An Exploration of Localized Transfer on Facial Expressions

- Computer Vision

Sasha Harrison, Frits van Paasschen

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ProdKG: Embedding Knowledge Graphs into Product Spaces

- General Machine Learning

Eric Scott Frankel, Tommy Yang, Dhruvik Parikh

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Deep Faking Political Twitter using Transfer lersining and GPT2

Natural Language

Madeline Miranda Liao, Ryan Kazuo Ressmeyer, Sam Harris Masling

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Continuous Control in Bearing-only Localization

Theory & Reinforcement Learning

Cedrick Mark Argueta

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Predicting Weight Loss Using The MyFitnessPal Dataset

Athletics & Sensing Devices

William Locke, Marissa Rachel Lee, Nick Comly

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Melbourne Airbnb Price Prediction

General Machine Learning

Han Wu, Tiancheng Cai, Kevin Han

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Understanding Molecular Data using Graph Neural Networks

General Machine Learning

Suraj Menon

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Barebones Music Generation

Audio & Music

Jacob Aaron Meisel, Ben Iver Rocklin

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Deap Learning for ETF Price Prediction

Finance & Commerce

King San Chan, Mike Victor Hsieh, Yue Pan

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NBA Game Predictions Based on Player Chemistry

General Machine Learning

Bai Yang Wang, Prastuti Singh

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The Goldilocks Zone and Geometric Features of High-Dimensional Parameter Spaces

General Machine Learning

Jeffrey Chang

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Tennis Match Predection using Machine Learning

Athletics & Sensing Devices

Ajay Krishna Amudan

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Generative Modeling and Prediction of Spontaneous Epileptic Seizures

Computer Vision

Peter Herminio Maldonado, Christine Joy Liu, Keegan Mehall

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How to Build a Recommender System

Audio & Music

Junhua Chen

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TF-Finder: Predicting the Underlying Transcription Factors in Genomic Sequencing Data

Life Sciences

David Wei Wu, Diwakar Ganesan

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Prioritized Experience Replay via Learnability Approximation

Theory & Reinforcement Learning

Megumi Sano, Nomi Ringach

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Discovering Consumer Preferences from Choices

Finance & Commerce

Lewis Richard Warne

[report] [poster]

White Christmas: Remaking Augmented Reality Censorship from Black Mirror with Identity-Preserving Instance Segmentation

Computer Vision

Mario Baxter, Michael Yoomin Lee

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Identification of Monolayer Material

Physical Sciences

Yue YU, Sze Cheung Lau, Jun Ho Son

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Multi Class Text Sentiment Analysis

Natural Language

Alex Nam, Jihun Hong, Austin Song Cai

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Smoothing Multi Stage Fine-Tuning in Multi-Task NLP Applications

Natural Language

Amirreza Ziai, Oleg Rudenko

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Paper Citation Classification

Natural Language

Camilo Andres Saavedra, Sophia Liu, Chung Son Bui

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Analysis and Classification of Symbolic Western Classical Music by Composer

Audio & Music

Tim Yngesjo, Saahil Jain, Akshay Smit

[report] [poster]

Context-based Flagging of Misclassified Objects in Aerial Imagery

Computer Vision

Yash Chandramouli, Caroline Natasha McKee, Paul Caron

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Forecasting Wikipedia Page Views with Graph Embeddings

General Machine Learning

Anthony Miyaguchi, Nicolai Galeo Garcia, Shaon Chakrabarti

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Music Generator

Audio & Music

Kelly Mawaba Ndombe

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Predicting streetcar delays

General Machine Learning

Andrei Cheremukhin

[report]

Interpretable & Actionable Models Using Attribute & Uncertainty Information

Computer Vision

Olivia Hsu, Mikaela Angelina Chan Uy, Yew Siang Tang

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Prediction of Future Offensive Performance of MLB Position Players

General Machine Learning

Derek Bryan McCreight, Stephanie Danielle Brito, Susana Benavidez, Peter Anthony McEvoy

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Toxic Comment Detection and Classification

Natural Language

Prinslou Kipchumba Tare

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Documentation Is All You Need

General Machine Learning

Felipe Bomfim Pinheiro de Meneses

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Link Failure Prediction and Localization in Cloud Scale Networks using Supervised Learning

General Machine Learning

Zahra Bakhtiari

[report] [poster]

Patch-based Classification on Low Resolution Images

Computer Vision

Xiaojun Sun, Tian Du, Wei Zhi Cheung

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Compositional Event Detection Using Weak Supervision

Computer Vision

Sundararajan Renganathan, Aasavari Dhananjay Kakne, Mark Darryl Cramer

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Utilizing color data in VoteNet for 3D Object Detection in Point Clouds

Computer Vision

Xue Dong

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Gaining a Statistical Edge in Scorre Prediction using Machine Learning: Role of Meta Statistics in Match Prediction

Athletics & Sensing Devices

Varun Harbola, Kyuho Lee

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What Defines a Good Stack Overflow Answer Post, an automated post rater

Natural Language

Yanpei Tian, Yanhao Jiang, Chunyue Wei

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Benchmarking Graph Convolutional Networks Performance with Mixed-Product Space Embedding

General Machine Learning

James Li, Fangchen Li, Lingjue Xie

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Recurrent Neural Physics Engine

General Machine Learning

Jinxiao Zhang, Jun Hwan (Joshua) Ryu

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Tuning of an Aircraft Pitch PID Controller with Reinforcement Learning and Deep Neural Nets

Theory & Reinforcement Learning

ADYASHA DEBAHUTI MOHANTY, Emma Paulina Schneider

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Regularization Paths for Stratified Cox's Porportional Hazards Model via Coordinate Descent

Life Sciences

Fang Cai

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Fake Review Detection on Yelp

Natural Language

Ferhat Turker Celepcikay, Khaled Aounallah, Ganapathy Sankararaman

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Audio Classification of Accelerating Vehicles

Audio & Music

Angel Yang, Emmett Daniel Goodman

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Spread of Wildfire Pollutants in California

General Machine Learning

Courtney Noel Moran, Richard Li, Akwasi Sarpong Owusu-Akyaw

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Prediction of Two Phase Flow Rate Through Wellhead Chokes in Oil Wells

Physical Sciences

TALAL SAAD AL SHAFLOOT, Negar Nazari

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Combining Signal Transformation to Learning Models for Human Activity Recognition

Life Sciences

Dan Luo, Tianyi Li

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Thank You Next: Using NLP Techniques to predict song skips on spotify based on sequential user and accoustic data

Audio & Music

Markie Maraya Wagner, Alex Joshua Hurtado, Surabhi Gopal Mundada

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Automatic Lunar Crater Detection from Optical Images and Elevation Maps

Computer Vision

Hugo Kitano, Mara Rachel Finkelstein, Susanna Maria Baby

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Machine Learning Techniques to Search for 2Î½Î²Î² decay of ^{136}Xe to the excited state of ^{136}Ba in EXO-200

Physical Sciences

George Halal

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Receipe Rating Prediction

Natural Language

Sarah Hensley

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Uncover The Factors To Help Measure How Young Children Learn

Athletics & Sensing Devices

Shenglan Yu

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Bypassing Censorship

Natural Language

Siah Yong Tan, Christopher Glenn Laban Cross, Sasankh Munukutla

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Improving LiDAR Point Cloud Classification of Urban Objects

Computer Vision

Peggy Wang, Tristan Ryan Gosakti

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Using Reinforcement Learning to Optimize the Rules of a Board Game

Theory & Reinforcement Learning

Gwanggyu Sun

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Exploring Feature Visualization: How Optimized Images Range Across Networks and Approaches

Life Sciences

Dawn Finzi

[report] [poster]

Exploration of Anomaly Detection through CCTV Cameras

Computer Vision

Sean Kazuyuki Decker, Wei Sheng Ler

[report] [poster]

Effects of Clinical Data in Skin Cancer Classification

Life Sciences

Monica Pan, Tom Young, Dezhen Kong

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Predicting the Amount of Water Resources in Lake Tahoe

Life Sciences

Ayaka Abe

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Subsurface Imaging using GANs

Physical Sciences

Rustam Akhmadiev

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Ensemble Networks for Better Facial Recognition of Bearded Faces

Computer Vision

Amogh Dixit, Akash Singhal, Edward Benjamin Vendrow

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Improving Neural Abstractive Summarization via Bert Score

Natural Language

Zhengping Zhou, Yuhui Zhang, Ruocheng Wang

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Computer Vision Lip Reading

Audio & Music

Grace Valeria Tilton

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Predicting Used Car Prices

General Machine Learning

Varun Uday Nayak, Pranav Vijay Gadre, KSHITIJ TUKARAM KUMBAR

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Semi-supervised EM & Weak-Supervision in Anomaly Detection

Physical Sciences

Minakshi Mukherjee, Suvasis Mukherjee

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"This Game Is In The Fridge": Predicting NBA Game Outcomes

Athletics & Sensing Devices

Jesse Alexander Rodriguez

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Contextual program token predistion

Natural Language

Scott Scott Kovach

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Predicting Cycling Performance From Historical Data

Athletics & Sensing Devices

Anna Revinskaya

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Estimating Required Dosage of Warfarin

General Machine Learning

Fengjun Yang, Chee Ching Ong

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Fine Grained Action Recognition in Sport Videos

Computer Vision

Amit Nagpal

[report] [poster]

Automatic Detection of Breaks and Fractures in X-Ray Bone Images

Life Sciences

Maurizio Valesani, Maithreyi Gopalakrishnan, Jaymee Sheng

[report] [poster]

Fooling Image Copy Detection Algorithms with GANs

Computer Vision

Anton Ponomarev

[report] [poster]

CNN Image Recognition Architecture Simplification using Patch-Based Data Reduction Techniques

Computer Vision

Jiying Zou, Rui Yan, Yuan Liu

[report] [poster]

Efficiently Satisfying Subgroup Fairness in Generalized Classification Settings

General Machine Learning

Fahim Tajwar, Matt Christiaan King

[report] [poster]

Wildfire Burn Area Prediction

Life Sciences

Adam Adam Stanford-Moore, Ben Karl Moore

[report] [poster]

Active Learning to Solve Class Imbalance in BirdSpecies Classification

- General Machine Learning

Christian Alexander Gabor

[report] [poster]

Identifying Brain Activity from EEG Recordings

- Athletics & Sensing Devices

Trenton Chang, Ray Iyer, Caroline Cin-kay Ho

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Pub2vec: A Recommender System for Similar Publications via Citation Network Embeddings

- General Machine Learning

Brian Kang Ryu

[report] [poster]

Quantum estimation of classifically intractable kernels for highly entangled feature maps

- Physical Sciences

Connie Hsueh, Ziheng Cao, Irene Pu Zhang

[report] [poster]

Predicting Airbnb Listing Price Across Different Cities

- Finance & Commerce

Xuanyu Zhou, Yuanhang Luo, Yulian Zhou

[report] [poster]

Corporate Bankruptcy Prediction

- Finance & Commerce

Neha Abajirao Patil

[report] [poster]

Weak Supervision in the Age of Transfer Learning for Natural language Processing

- Natural Language

Fei Fang, Zihan Xie

[report] [poster]

Predicting Future Performance of Convolutional Neural Networks in Early Training Stages

- General Machine Learning

Chengzhe XU, Yunfeng Xin, Hangyi Zhao

[report] [poster]

A Machine Learning Based Yelp Recommendation System

General Machine Learning

Pranav Bhardwaj, Nicolas Olivier Bievre, Frederik Johan Mellbye

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Money-laundering detection using machine learning with companies registersâ€™ public data

Finance & Commerce

Francois Xavier Alain Henri Chesnay, Sebastian Hurubaru

[poster]

Generating Whole Transcriptomic Profiles Using Compressed Sensing and Machine Learning

General Machine Learning

Dane Michael Hankamer, Andra Fehmiu, Kamal Obbad

[report] [poster]

Hyperbolic Graph Convolutional Neural Network for Link Prediction on Synthetic Graphs

General Machine Learning

Evan Laksono, Damir Vrabac

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Machine learning to predict Reynolds stresses in transitional boundary layer fluid flow

Physical Sciences

Shaun Ransom Harris

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The Dusk of Survey Dat and the Dawn of Aerial Imagery in Economics: Cost-efficient Housing Price Learning in the Developing World

General Machine Learning

Rodrigo Naumann, Matias Nicolas Cersosimo, Alexandr Lenk

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Modeling Wine Quality from Physicochemical Properties

General Machine Learning

Dale Angus

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Beyond Fuzzy Matching: Effective ways to transfer learning in NLP

Natural Language

Sruthi Poddutur

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Assessing Perceptual Noice Level Defined by Human Calibration and Image Rulers

Computer Vision

Lisa Lei

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Applying Machine Learning to Connect Four

Theory & Reinforcement Learning

Hormazd Nadir Godrej, Luke Kim, Chi Trung Nguyen

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Forecasting the GBP/USD Exchange Rate in the Era of Brexit

Finance & Commerce

Alp Kutlualp

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Weak Supervision with Incremental Source Accuracy Estimation

Theory & Reinforcement Learning

Richard Gresham Correro

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Emoji Prediction from Sentence

Natural Language

Chen Huang, Xueying Xie, Boyu Zhang

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Recovering Geometric Information with Learned Texture Perturbations

Computer Vision

Yongxu Jin

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Neural Question Generation

Natural Language

Bilguunzaya Battogtokh, Daniel Khang Thieu Do

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Audio Track Accompaniment

Audio & Music

Marion Lepert, Jerome Nowak

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Material Synthesis Techniques from a Data-driven Perspective

- Computer Vision

Qile Zhi, Yinchen Xu, Can Liu

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% LMS: A stochastic gradient algorithm inspired by neurobiology

- Theory & Reinforcement Learning

Stephane Remigereau, Jake Kaplan, Abhipray Sahoo

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Youtune Video Prediction will This be popular?

- Audio & Music

Yuping Li, Liqian Zhang, Kent Xin Kin Eng

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Loanliness: Predicting Loan Repayment Ability by Using Machine Learning Methods

- Finance & Commerce

Zihan Wang, Yiyun Liang, Xiaomeng Jin

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Machine Learning Algorithms for Sourcing and Evaluating VC and PE investment deals

Finance & Commerce

Andrew Benjamin Matangaidze, Yijie Sun, Prerna Pankaj Khullar

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Software error grouping with machine learning

- General Machine Learning

Arpad Jozsef Tamasi

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Theme Classification for texts Using Naive bayes and neural Networks

- Natural Language

Remy Zawislak, Albin Larsson Forsberg

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Motor temperature prediction with KNN and CNN

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