

# Voravee Upatising

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Computer Engineering senior with hands-on experience in software engineering and database administration. Diligent self-starter with an interest in Python development concentrated on Data Science and Deep Learning.

## EDUCATION

University of Massachusetts Amherst

May 2020

Bachelor of Science in Computer Engineering, GPA 3.1

## COURSEWORK

Data Structures, Statistics, Software Engineering, Artificial Intelligence, Algorithms, Data Science, Operating Systems, Linear Algebra, Signals and Systems, Probability, Machine Learning, Computer Vision, System Design

## WORK EXPERIENCE

**Fast Enterprises, LLC** – Salt Lake City, UT

**Implementation Consultant Intern**

Summer 2019

- Interned as a developer on the Vehicle and Dealer Registration System used by all DMV offices in Utah
- Performed End-to-End and Stress Testing for various processes within the VADRS program
- Implemented an internal email subsystem within the program to better facilitate in-office communication
- Worked with QA testers to fix critical production errors in a development-testing-staging-production cycle
- Optimized SQL queries by removing site indexes and reworking index scans into index seeks
- Consulted with business analysts to configure the system to their specific needs
- Documented all classes within 75 business critical VB.NET projects
- Trained full-time employees on how to effectively use the Learning Manager subsystem

## PERSONAL PROJECTS

View on my GitHub or Kaggle profile

**Recycle Bot**

Spring 2019

- Designed a system that can classify and physically sort trash and recyclable waste using Keras in Python ported to Raspberry Pi
- Created platform where waste is photographed, classified using Convolutional Neural Network, and sorted using Servo motor
- Achieved successful classification of trash and recyclables tested on most common items improperly discarded in the local area

**Music Composition Generative Adversarial Network**

Spring 2019

- Trained a system of adversarial neural networks to generate melodies corresponding to different genres of music
- Compiled dataset of MIDI songs and designed algorithm to parse musical data and reshape to dimensions needed
- Designed an embedded system that interfaces with an electronic piano for user I/O and live playback of generated melody

**Brain Tumor Detection Convolutional Neural Network**

Fall 2019

- Designed a system that detects brain tumors in MRI images and classifies patients into risk or non-risk classes
- Trained Convolutional Neural Network on dataset of brain scans captured and labeled by medical researchers
- Successfully predicts the probability of a patient being in risk of a tumor based on features captured from within MRI scans

**Unsupervised Learning Image Segmentation**

Fall 2019

- Coded image segmentation program that segments images of food in an unsupervised manner with no labels given
- Preprocessed the images into RGB and HSV color spaces creating a feature matrix to cluster data points on
- Achieved successful results segmenting food from lunch trays using K-Means clustering algorithm

## LEADERSHIP

Institute of Electrical and Electronics Engineers, Treasurer

May 2018 – Present

UMass Skateboard Club, Treasurer

Sept 2016 – Present

## TECHNICAL SKILLS

SQL Server Management Studio, MySQL, Visual Basic .NET, UNIX, Python, Pandas, Scikit-Learn, NumPy, Prophet, TensorFlow, Keras, Java, C, C++, C#, MATLAB, HTML5, CSS3, JavaScript, MongoDB, AWS