

DREW HAYWARD

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EDUCATION

Michigan State University

Masters in Computer Science, GPA 3.9/4.0

Aug. 2019 – Graduating Dec 2021

East Lansing, MI

Grove City College

Bachelor of Science in Computer Science, Minor in Mathematics, GPA 3.8/4.0

Aug. 2016 – May 2019

Grove City, PA

EXPERIENCE

Research Assistant

Michigan State University

Jan 2020 – May 2021

East Lansing, MI

- Developed Deep Learning models for Visual Question Answering (VQA) in Pytorch
- Researched Graph Neural Network approaches to VQA
- Explored applications of Neural Module Networks in VQA

Software Developer

Edgewater Safety Systems

May 2019 – August 2019

St. Joseph, MI

- Created a prototype app in React Native to aid caregivers of dementia patients
- Designed a system which scheduled recorded messages to play on a React web-app for patients

REU Summer Intern

Carnegie Mellon University

May 2018 – August 2018

Pittsburgh, PA

- Researched hybrid adaptive systems for use in situations like server load-balancing
- Modified a hybrid system simulator written in C++

Software Development Intern

OSIsoft

May 2017 – August 2017

Johnson City, TN

- Developed an internal website using AngularJS to aggregate and visualize customer engagement
- Managed a backend server in C# to serve data from an SQL database

SELECTED PROJECTS

Graph Alignment for Visual Question Answering | *Python, Pytorch*

- Developed a novel model for answering natural language questions about an image
- Used Graph Neural Networks to encode semantic parses of question and image scene graphs
- Utilized many state-of-the-art language and vision architectures like Transformers (BERT, LXMERT), CNNs (ResNets) and RNNs

Semantic Role Labeling Model | *Python, Pytorch*

- Replicated a published Semantic Role Labeling model in Pytorch
- Implemented a BIO-tagging LSTM Model with Viterbi decoding

EuchreBot | *Golang*

- Developed an AI system for playing the card game Euchre
- Implemented counterfactual regret minimization to refine agent strategy

TECHNICAL SKILLS

Languages: Proficient in Python, JavaScript. Familiar with Golang, C/C++, HTML/CSS.

Frameworks/Libraries: Pytorch, Numpy, Tensorboard, React/React Native

Developer Tools: Linux, Git, SSH, Docker, VS Code