

YASH VESIKAR

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RESEARCH INTERESTES

Evolutionary Optimization, Programming Languages, Program Synthesis, Genetic Programming

EDUCATION

Michigan State University

B.S. Computer Engineering

College of Engineering

Honors College

Dean's List (All full-time semesters)

Cumulative GPA: **3.74/4.00**

Technical GPA: **3.72/4.00**

Sept. 2016 – Dec. 2019

RESEARCH EXPERIENCE

COIN Laboratory – Michigan State University

Undergraduate Research Assistant

- Currently working on Dynamic Time Dependent Travelling Salesman Problem for harbor-sea service ship course scheduling and routing problems.
- Worked with Dr. Kalyanmoy Deb to develop a novel reference point based many-objective optimization algorithm called R-NSGA-III.
- Contributing to a modular Evolutionary Multi-Objective Optimization library with algorithms and test problems in python 3 called [PyMoo](#).

May 2018 – Present

Engineering Summer Undergraduate Research Experience – COIN Laboratory MSU

Summer Research Assistant

- Spent 12 weeks as a full-time research assistant working on technical and theoretical design of user preference multi-objective optimization algorithms.
- Submitted approach and findings on newly developed algorithm, R-NSGA-III, to IEEE Symposium Series on Computational Intelligence.

May 2018 – Aug. 2018

CSANN Laboratory

Undergraduate Research Assistant

- Developed prototype mobile application for object identification using “lightweight” deep neural network using cross-platform mobile application development technology.

Jan. 2018 – May 2018

TEACHING EXPERIENCE

Michigan State University

Undergraduate Lecture Assistant – “Data Structures and Algorithms”

- Assisted students with algorithms and data structures projects and questions.
- Designed and graded weekly student projects and operated weekly help room.

Sept. 2018 – May 2019

Undergraduate Lecture Assistant – “Introduction to Programming I”

- Taught a lab of 20+ students the fundamentals of Python programming.
- Graded weekly projects, held one on one student meetings, and operated a weekly help room.

Jan. 2018 – May 2018

PROFESSIONAL EXPERIENCE

Microsoft Corporation – Redmond, WA

Program Manager Intern – Data Analyst

- Developed a methodology to analyze Azure Data customer consumption ramp times and determine patterns in customers consumption lifecycles.
- Created business analysis process to identify customers at risk of leaving Azure Data services based on consumption trends – used internally as a reporting metric.

May 2019 – Aug. 2019

Fulcrum-GT – Chicago, IL

Software Engineering Intern – Full Stack Developer

May 2017 – Aug. 2017

- Led the front-end development team to develop a chat bot for professional service providers.
- Demonstrated prototype application and led technology discussion at ILTACON - A legal technology conference.

Spartan Innovations –East Lansing, MI

Software Engineer – App Developer

Jan 2017 – Jan. 2018

- Worked alongside student entrepreneurs and local businesses to design and develop 10+ cross platform MVP mobile applications.

PUBLICATIONS AND PRESENTATIONS

"Identifying User Preferred Solutions using R-NSGA-III" - Presentation

Evolutionary Multi-Criterion Optimization Conference – East Lansing, MI

March 2019

"Reference Point Based NSGA-III for Preferred Solutions" - Publication

IEEE Symposium Series on Computational Intelligence Conference – Bangalore, India

November 2018

"Reference Point Based Multi-Objective Optimization for Preferred Solutions" - Presentation

Mid-SURE Conference – East Lansing, MI

July 2018

SKILLS & PROJECTS

Proficient: Python, NumPy, MATLAB, HTML/CSS, JavaScript, ReactJS

Basic: C/C++, Bash, SQL, R, Django

Non-Technical: Leadership, Public Speaking, Organization

NEO – Children’s Hospital of Wisconsin

Lead Developer/Solution Engineer

Oct. 2017 - Aug. 2018

- Developed a web tool for the Children’s Hospital of Wisconsin that aids physicians in making life-saving decisions for preterm babies suffering from encephalopathy.

PyLox – Crafting Interpreters

Developer

Sept. 2019 – Present

- Developing a C-style interpreter in Python for C language variant called LoX.
- Project is an extension of a previous compiler developed for a toy language called LOLcode, which was created as part of the compilers course (CSE 450) at Michigan State University.

ORGANIZATIONS

SAE Auto Drive

Autonomous Vehicle Competition

Aug. 2017 – May 2018

- Lead mapping team in development of a searchable and interactive map of North America.

SpartaHack

Michigan State University Hackathon

Sept. 2016 – Feb. 2018

- Worked as the sponsor liaison, helped secure over \$70,000 in hackathon sponsorships.

AWARDS & HONORS

Thomas and Marilyn Culpepper Engineering Endowed Scholarship

Sept. 2019 – Dec. 2019

Farah Harb & Mike Schmidt Ford Company Scholarship

Sept. 2018 – May 2019

Alan Mulally Leadership in Engineering Scholarship Finalist

Sept. 2017