

# MATTHEW DUROCHER

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## EDUCATION

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**Bachelor of Science (Economics and Computer Science)**, University of Michigan Aug 2019 - Dec 2022

Relevant Coursework: Web Systems, Computer Security, User Interface Development, Machine Learning, Software Engineering, Extended Reality and Society, Data Structures and Algorithms, Game Theory, Econometrics

**Associates in Science and Arts**, Northwestern Michigan College Aug 2017 - April 2019

## SKILLS

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<b>Languages</b>	C/C++/C#, Python, HTML, CSS, JavaScript, SQL
<b>Libraries/Frameworks</b>	React, Flask, Jinja, PyTorch, NumPy, Pandas
<b>Other</b>	Unreal, Unity, AWS, Excel, Jira, LaTeX, Wireshark, Shell scripting, Git

## EXPERIENCE

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**Research Assistant** Sept 2020 - April 2021  
University of Michigan *Ann Arbor, MI*

- Assisted a PhD candidate in the University of Michigan's Ross School of Business with her thesis as part of the Undergraduate Research Opportunity Program (UROP)
- Collected and analyzed data on hundreds of SEC-registered broker-dealers to look for patterns regarding where their securities trades are sent and total compensation for each
- Used this data to draw conclusions regarding the broker-dealers' market power, the trading volume of each, and if state legislation has a major impact on these companies' order flow

## PROJECTS

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**Instagram Clone Website** - Implemented both server-side and client-side dynamic pages versions of a mock Instagram website. Utilized HTML, CSS, SQL, and JavaScript w/ React framework, and deployed the site to AWS.

**VR Computer Lab** - Developed an interactive virtual reality computer lab using the Unreal game engine. Included throwing away pieces of garbage, drawing on a whiteboard, talking to NPCs, and pulling a fire alarm.

**AR Smartphone App** - Created a tree-planting augmented reality application inspired by Pokémon GO using the Unity game engine. Allowed users to spawn trees, feed squirrels w/ acorns, and track their coordinates with the Mapbox API.

## CAMPUS INVOLVEMENT

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**M-etrics** - Analyzed econometric datasets in CSV and TXT format using OLS regression in Python using the NumPy and Pandas libraries. Formatted cleaned-up data using JupyterNotebook into visually appealing and informative graphs using the Matplotlib library

**Theta Sigma Transfer Student Fraternity** - Tracked fraternity expenditures and revenue through managing the Excel balance sheet and implemented several functions to increase efficiency and accuracy. Organized fraternity events with other Executive Board members and implemented professional development opportunities for transfer students

## ABOUT ME

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- Languages: limited working proficiency in German, elementary proficiency in French
- Other Interests: Jiu-jitsu, Muay Thai, hiking, reading, traveling, and trying new foods