

# Mara Schwartz

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## EDUCATION

### MASTER OF SCIENCE | RENSSELAER POLYTECHNIC INSTITUTE

August 2021 - December 2022

COMPUTER SCIENCE, GPA 3.92 / 4.0

- Relevant Coursework: ML From Data, ML & Optimization, Distributed Systems & Algorithms, Parallel Computing, Computing & Quantum Computing, Design & Analysis of Algorithms

### BACHELOR OF SCIENCE | RENSSELAER POLYTECHNIC INSTITUTE

August 2017 - May 2021

DUAL IN COMPUTER SCIENCE AND COGNITIVE SCIENCE

MINOR IN MATHEMATICS, MAGNA CUM LAUDE, GPA 3.86 / 4.0

- Relevant Coursework: Social Computing, Linear Algebra, Graph Theory, Intro to AI, Cognitive Modeling, Numerical Computing, Mathematical Models of Operations Research, Programming Languages, Computability and Logic, Operating Systems
- ALAC Tutor for Computer Science 1 and Data Structures, Undergraduate Teaching Assistant for Operating Systems
- UPE Honor Society Member
- Dean's Honor List (2017-2021)
- Rensselaer Leadership Award (2017-2021)

## EXPERIENCE

### FRONT OF HOUSE, PART OWNER | CAFE EUPHORIA

May 2023 - December 2023 | Troy, NY

- Created a sales analysis tool which, using transaction data from Square, allowed users to compare item performance, enabling data-backed menu adjustments, removals, and additions
- Revamped our Espresso Service, trained all other staff members in Barista and Espresso Service
- Created thorough documentation on Espresso and Drink preparation to maintain high consistency and quality standards

### GRADUATE RESEARCH ASSISTANT | LACAI LAB

August 2022 - December 2022 | Troy, NY

- Worked on GATOR, a 2.5-year IBM-funded research project to prototype a new type of task-oriented human-machine dialogue system
- Performed real-user evaluation of the model to compare with previous self-play evaluation done using the "Persuasion for Good" corpus
- Results published in the AHFE International 2023 conference proceedings

### TEACHING ASSISTANT | RENSSELAER POLYTECHNIC INSTITUTE

September 2021 - May 2022 | Troy, NY

- TA for Programming Languages (Fall 2021) and Data Structures (Spring 2022)
- Mentored students, created and graded programming assignments, graded tests, and held office hours and labs

### UNDERGRADUATE RESEARCH ASSISTANT | LACAI LAB

May 2020 - August 2021 | Troy, NY

- Worked on the Socio-cultural Content in Language (SCIL) toolset, an NLP toolset used for automatically identifying social actions and characteristics of groups by examining the language used by members of those groups
- Rewrote and updated the SCIL toolset as a python package; achieved significantly faster execution, equivalent accuracy, extended functionality, and greater modularity than the older Java version along with creating a web interface for the tool as well

## PROJECTS

### MASTER'S PROJECT | PYTHON, SCIKIT-LEARN, HUGGING FACE TRANSFORMERS, JUPYTER

Principal Investigator | 2022

- Created twitter user clusters using graph topography and used those clusters to perform multi-turn dialogue analysis
- Identified main influencers and influential opinions within the user clusters using the SCIL toolset on constructed dialogues

### YET ANOTHER COURSE SCHEDULER | ANGULARJS, RUBY ON RAILS, TYPESCRIPT, DOCKER

Project Lead, Developer, Mentor | 2018 - 2019

- Improved website layout, functionality, and ease of use by creating a scheduling sidebar, an admin page to allow administrators to modify the database, and helped implement multi-semester course scheduling
- Mentored students with the Rensselaer Center for Open Source (RCOS)

## PUBLICATIONS

[1] A. Sanders, M. Schwartz, A. Chang, S. Briggs, J. Braasch, D. Wang, M. Si, and T. Strzalkowski, Towards a proper evaluation of automated conversational systems, in Artificial Intelligence and Social Computing, vol. 72, July 2023. doi: 10.54941/ahfe1003276.

## SKILLS

- Programming Languages: C/C++, Python, Java, Javascript, SQL, Erlang
- Libraries: TensorFlow, PyTorch, scikit-learn, Jupyter
- Tools: Git, Docker, Linux/Unix, L<sup>A</sup>T<sub>E</sub>X
- Languages: Limited working proficiency in Japanese