Ethan Chau

(425) 429-8465 | echau18@cs.uw.edu

Web: echau18.gitlab.io | LinkedIn: echau18 | GitHub: ethch18

Education

University of Washington

M.S., Computer Science

Expected Jun. 2021 | Seattle, WA

GPA: 4.00

B.S. with Distinction,

Computer Science (Data Science)

B.A., Linguistics

Sept. 2016 – Jun. 2020 | Seattle, WA Thesis: *Towards Resource-Efficient Contextual Word Representations for*

Parsing

GPA: 3.97 (CS), 3.98 (Linguistics)

Swiss Federal Institute of Technology (ETH)

Exchange Student, Computer Science Sept. 2019 – Feb. 2020 | Zürich, CH

Coursework

Natural Language Processing Advanced NLP • NLP Capstone Artificial Intelligence Reliable and Interpretable AI Advanced Machine Learning Information Retrieval Data Structures • Algorithms Operating Systems • Security

Skills

Programming

Proficient

Java, JavaScript, Python

Familiar

Bash, C, C++, C#, Google Protobuf, Hack, HTML/CSS, Ruby, SCSS, SQL, Thrift

Technologies

AllenNLP, Git, Mercurial, NumPy, PyTorch, React.js, Spring Framework

Languages

English (Native), Mandarin (Fluent), Cantonese (Proficient), Spanish (Intermediate), German (Beginner)

Leadership

Common Ground Fellowship

Discussion Leader Jun. 2020 – Present Core Team Leader Aug. 2017 – Aug. 2018

Experience

University of Washington | NLP Researcher

Mar. 2018 - Present | Seattle, WA | Advisor: Prof. Noah A. Smith

 Leading the design of informed model training methods for low-resource contextual word representation, with a 39% relative error reduction on parsing evaluations

Facebook | Machine Learning Engineering Intern

Jun. 2020 - Sep. 2020 | Seattle, WA

- Drove the development of a configurable, E2E system for content retrieval and recommendation in C++ and Hack, increasing engagement by 2.5%
- Designed efficient data-collection pipelines for **search index** construction
- Investigated ML algorithms for content representation and achieved a 75% relative error reduction
- Contributed to the PyTorch open-source project

Facebook | Software Engineering Intern (Backend)

Jun. 2019 - Sept. 2019 | Menlo Park, CA

- Architected a modular, interpretable, and configurable suggestion system in Hack with a 37% higher success rate than previous versions
- Engineered ML features that achieved ~80% accuracy and F1 on the task
- Developed a multi-stage model training pipeline tailored to the application

University of Washington | Teaching Assistant (NLP)

Jan. 2019 - Mar. 2019 | Seattle, WA | Instructor: Prof. Noah A. Smith

- Developed a new **PyTorch** and **AllenNLP**-based text classification assignment
- Planned and led a weekly discussion section and office hours for 35 students
- Published a comprehensive, officially featured tutorial for AllenNLP (link)

Indeed.com | Software Engineering Intern (Backend/Data)

Jun. 2018 - Aug. 2018 | Seattle, WA

- Integrated an NLP library into a suggestion service and developed a text
 extraction-based heuristic, yielding 6x the number of acceptances and
 reaching 2x as many users as the next best source
- Architected and developed a Java-Protobuf service for machine learning evaluation that decreased required requests by 5x

Indeed.com | Software Engineering Intern (Full Stack)

Jun. 2017 - Sept. 2017 | Seattle, WA

- Built and stylized a custom **React** frontend to minimize server load
- Implemented an extensible Java data storage and retrieval model

Projects

AllenNLP-xla | Machine Learning Library

- A port of the AllenNLP library for NLP development, with TPU support (link)
- Technologies: Python, PyTorch

Where's My Bus? | Full-Stack Web App

- A lightweight transit tracker for the Seattle area (link)
- Technologies: Azure App Service, Brunch, Python, React

Community Involvement

Evangelical Chinese Church | Taiwan/AWANA Youth Leader

Sept. 2013 - Sept. 2018 | Redmond, WA & New Taipei City, Taiwan

- Designed and taught daily English classes to 20+ under-resourced youth
- Facilitated daily re-evaluations of content and methods with fellow teachers
- Supervised and **mentored** incoming youth leaders