Ethan **Chau**

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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