

# Ethan Chau

📧 ethch18 | in echau18

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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

### 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

### FACEBOOK | MACHINE LEARNING ENGINEERING INTERN

Jun. 2020 - Present | Seattle, WA

- Developing a configurable, end-to-end system for content **retrieval** and recommendation using **C++** and **Hack**
- Designing efficient data-collection pipelines for **search index** construction
- Investigating techniques for content ranking with **PyTorch** neural networks

### UNIVERSITY OF WASHINGTON | NLP RESEARCHER

Mar. 2018 - Present | Seattle, WA | Advisors: Prof. Noah A. Smith, Lucy H. Lin

- Leading the design of informed model training methods for **low-resource** contextual word **representation**
- Developing a system for parsing nonstandard dialects of English

### FACEBOOK | SOFTWARE ENGINEERING INTERN (BACKEND)

Jun. 2019 - Sep. 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 📄

### INDEED.COM | SOFTWARE ENGINEERING INTERN (BACKEND/DATA)

Jun. 2018 - Aug. 2018 | Seattle, WA

- Integrated an **NLP** library into a **backend** 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 infrastructure for machine learning evaluation that decreased required service calls by **5x**
- Deployed a **Jenkins**- and **Mesos**-based continuous integration system

### 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 natural language processing library with TPU support 📄
- Technologies: **Python**, **PyTorch**

### WHERE'S MY BUS? | FULL-STACK WEB APP

- A lightweight transit tracker for the Seattle area 📄
- 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