Pooja Sethi

Machine Learning Engineer

@ psethi17@cs.washington.edu ☑ poojasethi.github.io ♀ Redmond, Washington

EDUCATION

2013 - 2017 University of Washington, Seattle, WA

B.S. in Computer Engineering, Magna Cum Laude With Department Honors GPA: 3.85

Software Engineering Experience

Current October 2017

Machine Learning Engineer, FACEBOOK REALITY LABS, Redmond, WA

- > Part of pioneer team that built the Natural Language Understanding (NLU) system for Facebook's first voice assistant. The Facebook Assistant is available on Portal, Oculus, and stealth Facebook Reality Labs augmented reality products.
- > Leading projects leveraging weak supervision and active learning techniques to improve semantic parsing quality at scale. Designed and built a system called AutoNLU which has led to 17% relative error reduction on live test sets.
- > Experienced with "full-stack" ML engineering. Built widely used data labeling and validation library; model deployment pipelines; and live traffic training pipelines. Defined best practices for model evaluation with linguist team.
- > Joined at 30 engineers; now over 300 engineers. Have helped team grow by conducting 95+ technical interviews. Started a mentorship program with 60+ participants which received recognition from VP of FRL, Andrew Bosworth.

NLP Python PyTorch Pandas Hive Spark SQL C++

December 2016 September 2016

Machine Learning Engineer Intern, INSTAGRAM, Menlo Park, CA

> Developed new features for ranking stories and media on the IG explore tab. Ran A/B tests and demonstrated increase in key metrics, such as immersive viewer time spent, by 8-10%.

Ranking Python Hive Dataswarm

September 2016

Software Engineer Intern, GOOGLE, Mountain View, CA

June 2016 > Built internal web app for visualizing accounting impact for Google Payments team.

Java AngularJS Databases

March 2016 January 2016

Software Engineer Intern, MICROSOFT, Bellevue, WA

> Built a dynamically linked library (DLL) to support rapid feature development and deployment for Bing ranking models.

Ranking C++

December 2015

Software Engineer Intern, GOOGLE, Kirkland, WA

September 2015

> Built a random schema generator for fuzz-testing of Spanner, Google's globally distributed database.

C++ Distributed Systems

September 2015

Software Engineer Intern, FACEBOOK, Menlo Park, CA

June 2015

> Built and launched group payments feature in Messenger for Android.

Android Java Figma

RESEARCH EXPERIENCE

September 2017 March 2017

Research Assistant, UW NATURAL LANGUAGE PROCESSING XLAB, Seattle, WA

- > Proposed a new NLP task, conversational question generation (CQG). Work received the Facebook ParlAl research award.
- > Developed RNN models for question generation (before large pretrained models came in vogue).
- > Advised by Professor Yejin Choi.

June 2017

Research Assistant, UW Information & Communication Technology for Development (ICTD) Lab, Seattle, WA

April 2014

- > Developed Respeak, an Android application that empowered low-income, blind users in India to earn an income by performing audio-based crowdsourcing tasks.
- > System demonstrated a 6X improvement in Hindi and 3X improvement in Indian-accented English ASR transcription accuracy.
- > Advised by Professor Richard Anderson and Aditya Vashistha (now Assistant Professor at Cornell University).

March 2015 June 2015

Visiting Undergrad Researcher, ALLEN INSTITUTE FOR ARTIFICIAL INTELLIGENCE (Al2), Seattle, WA

- > Explored adversarial perturbations of fourth grade science questions in order to increase or lower their difficulty for a Q&A model.
- > Advised by Been Kim (now at Google Brain).

PUBLICATIONS

BSpeak: An Accessible Voice-based Crowdsourcing Marketplace for Low-Income Blind People

CHI 2018

Aditya Vashistha, Pooja Sethi, and Richard Anderson. 2018 CHI Conference on Human Factors in Computing Systems (CHI '18)

Respeak: A Voice-based, Crowd-powered, and Accessible Speech Transcription System

Pooja Sethi. Supervised by Richard Anderson. *University of Washington Senior Undergraduate Thesis for Departmental Honors in Computer Science*

Best Undergraduate Honors Thesis

Respeak: A Voice-based, Crowd-powered Speech Transcription System

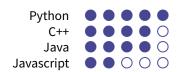
CHI 2017

Aditya Vashistha, Pooja Sethi, and Richard Anderson. 2017 CHI Conference on Human Factors in Computing Systems (CHI 17) Best Paper Honorable Mention (top 5 % of submissions)

AWARDS & HONORS

- 2017 Facebook ParlAl Research Grant \$19,800 awarded to UW NLP group for research on conversational question generation.
- 2017 Outstanding Computer Engineering Senior Award Top computer engineering senior in graduating class.
- 2017 Best Undergraduate Honors Thesis Award Top computer science & engineering senior thesis in graduating class.
- 2016 Society of Women Engineers, Outstanding Engineer Award Top female computer engineering student in department.
- 2016 TUNE House Scholarship Competitive 1-year scholarship for women at UW covering all room and board.
- 2016 Google Grace Hopper Conference Scholarship
- 2016 Facebook F8 Conference Scholarship
- 2016 Tau Beta Pi
- 2013 UW Martin Family Foundations Honors Scholarship 3-years merit-based full-tuition scholarship.
- 2013 UW Mary Gates Scholarship 1-year merit-based full-tuition scholarship.
- 2013 NASA Space Grant Scholarship
- 2013 UW Computer Science & Engineering Department Freshman Direct Admit < 5% acceptance rate.
- 2013 Granite Falls High School Valedictorian

LANGUAGES



MENTORING & SERVICE

- > Current Duke Technology Scholars mentor
- > Current Started and lead Facebook Assistant mentorship program (60+ participants)
- > 2018 Intern manager for Zoe Papakipos (now Research Engineer at Facebook Al Research)
- > 2017 UW ACM-W Vice Chair
- > 2015 UW ACM Public Relations Officer