

Pooja SETHI

ML | NLP Engineer

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I'm a product-focused Machine Learning (ML) and Natural Language Processing (NLP) engineer. Currently, I primarily work on ML Systems; I build foundational tools for data programming, active learning, and weak supervision for NLP. I'm also intimately familiar with MLOps and the full product development lifecycle.

EDUCATION

2021 - Current M.S. in Computer Science, AI Concentration	Stanford University Honors Cooperative Program
2013 - 2017 B.S. in Computer Engineering	University of Washington, Seattle Magna Cum Laude With Department Honors <i>Best Undergraduate Honors Thesis Award</i> <i>Outstanding Computer Engineering Senior Award (Top 2 Graduates)</i>

SOFTWARE ENGINEERING EXPERIENCE

Current October 2017	Senior Software Engineer, Machine Learning, FACEBOOK REALITY LABS, Redmond, WA <ul style="list-style-type: none">➤ Founding team member that built the Natural Language Understanding (NLU) system for Facebook's first voice assistant. The Facebook Assistant is available on Portal, Oculus, and upcoming Facebook Reality Labs products.➤ Leading projects leveraging active learning to refresh models with new data. Designed and built a system called AutoNLU which has led to 17% relative error reduction on live test sets.➤ Experienced with MLOps. 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. Conducted 100+ technical interviews. Created a mentorship program with 70 participants. Mentored two software engineering interns. <div>NLP Python PyTorch Pandas Hive Spark SQL C++</div>
December 2016 September 2016	Software Engineer, Machine Learning Intern, INSTAGRAM, Menlo Park, CA <ul style="list-style-type: none">➤ 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%. <div>Ranking Python Hive Datascience</div>
September 2016 June 2016	Software Engineer Intern, GOOGLE, Mountain View, CA <ul style="list-style-type: none">➤ Built internal web app for visualizing accounting impact for Google Payments team. <div>Java AngularJS Databases</div>
March 2016 January 2016	Software Engineer Intern, MICROSOFT, Bellevue, WA <ul style="list-style-type: none">➤ Built a dynamically linked library (DLL) to support rapid feature development and deployment for Bing ranking models. <div>Ranking C++</div>
December 2015 September 2015	Software Engineer Intern, GOOGLE, Kirkland, WA <ul style="list-style-type: none">➤ Built a random schema generator for fuzz-testing of Spanner, Google's globally distributed database. <div>C++ Distributed Systems</div>
September 2015 June 2015	Software Engineer Intern, FACEBOOK, Menlo Park, CA <ul style="list-style-type: none">➤ Built and launched group payments feature in Messenger for Android. <div>Android Java Figma</div>

RESEARCH EXPERIENCE

September 2017 March 2017	Research Assistant, UW NATURAL LANGUAGE PROCESSING XLAB, Seattle, WA <ul style="list-style-type: none"> > Proposed a new NLP task, conversational question generation (CQG). Work received the Facebook ParAI research award. > Developed RNN models for question generation (before large pretrained models came in vogue). > Advised by Professor Yejin Choi.
June 2017 April 2014	Research Assistant, UW INFORMATION & COMMUNICATION TECHNOLOGY FOR DEVELOPMENT (ICTD) LAB, Seattle, WA <ul style="list-style-type: none"> > 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 (AI2), Seattle, WA <ul style="list-style-type: none"> > 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 \(top 5 % of submissions\)](#)

SELECTED AWARDS & HONORS

- 2017 **Facebook ParAI Research Grant** \$19,800 awarded to UW NLP group for research on conversational question generation.
- 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**
- 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**