

Pooja SETHI

Machine Learning Engineer

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EDUCATION

2013 - 2017 University of Washington, Seattle, WA
GPA : 3.85 B.S. in Computer Engineering, *Magna Cum Laude With Department Honors*

SOFTWARE ENGINEERING EXPERIENCE

Current October 2017	Machine Learning Engineer, FACEBOOK REALITY LABS, Redmond, WA <ul style="list-style-type: none">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. <div><div>NLP</div><div>Python</div><div>PyTorch</div><div>Pandas</div><div>Hive</div><div>Spark SQL</div><div>C++</div></div>
December 2016 September 2016	Machine Learning Engineer 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><div>Ranking</div><div>Python</div><div>Hive</div><div>Datascrumb</div></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><div>Java</div><div>AngularJS</div><div>Databases</div></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><div>Ranking</div><div>C++</div></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><div>C++</div><div>Distributed Systems</div></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><div>Android</div><div>Java</div><div>Figma</div></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 ParlAI research award.Developed RNN models for question generation (before large pretrained models came in vogue).Advised by Professor Yejin Choi.
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June 2017	Research Assistant, UW INFORMATION & COMMUNICATION TECHNOLOGY FOR DEVELOPMENT (ICTD) LAB, Seattle, WA
April 2014	<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	Visiting Undergrad Researcher, ALLEN INSTITUTE FOR ARTIFICIAL INTELLIGENCE (AI2), Seattle, WA
June 2015	<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)

AWARDS & HONORS

2017 **Facebook ParlAI 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

Python	● ● ● ● ●
C++	● ● ● ● ○
Java	● ● ● ● ○
Javascript	● ● ○ ○ ○

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 AI Research)
- > **2017** UW ACM-W Vice Chair
- > **2015** UW ACM Public Relations Officer