

# Pooja SETHI

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I build technology to solve human problems. My engineering and research interests are in NLP and its applications.

## EDUCATION

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- 2021 - Current** **Stanford University**  
GPA : 3.91 M.S. in Computer Science, AI Concentration  
*Honors Cooperative Program*
- 2013 - 2017** **University of Washington, Seattle**  
GPA : 3.85 B.S. in Computer Engineering  
*Magna Cum Laude With Department Honors & Best Undergraduate Honors Thesis Award*  
*Outstanding Computer Engineering Senior Award (awarded to top two graduating seniors)*


## SOFTWARE ENGINEERING EXPERIENCE

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- IMPIRA** | **Senior Software Engineer 2, Machine Learning**, *October 2021-July 2022*, San Francisco, CA  
> Shipped Transformer (LayoutLM) models for unsupervised document clustering and classification. Research demo and paper available at [github.com/poojasethi/visual-doc-clustering](https://github.com/poojasethi/visual-doc-clustering).
- FACEBOOK REALITY LABS** | **Senior Software Engineer, Machine Learning**, *October 2017-October 2022*, Redmond, WA  
> Early engineer on the Natural Language Understanding (NLU) team for Facebook Assistant, which was launched on [Portal](#) and [Oculus](#).  
> Built [AutoNLU](#), an active learning and data labeling tool for semantic parsing.  
> Conducted 100+ technical interviews. Bootstrapped and grew internal mentorship program to 70 participants. Mentored two software engineering interns.
- INSTAGRAM** | **Software Engineer Intern, Machine Learning**, *September 2016-December 2016*, 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%.
- GOOGLE** | **Software Engineer Intern**, *June 2016-September 2016*, Mountain View, CA  
> Built internal web app for visualizing accounting impact for Google Payments team.
- MICROSOFT** | **Software Engineer Intern**, *January 2016-March 2016*, Bellevue, WA  
> Built a dynamically linked library (DLL) to support rapid feature development and deployment for Bing ranking models.
- GOOGLE** | **Software Engineer Intern**, *September 2015-December 2015*, Kirkland, WA  
> Built a random schema generator for fuzz-testing of Spanner, Google's globally distributed database.
- FACEBOOK** | **Software Engineer Intern**, *June 2015-September 2015*, Menlo Park, CA  
> Built and launched group payments feature in Messenger for Android.

## RESEARCH EXPERIENCE

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- UW NATURAL LANGUAGE PROCESSING XLAB** | **Research Assistant**, *September 2017-March 2017*, Seattle, WA  
> 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.

UW INFORMATION & COMMUNICATION TECHNOLOGY FOR DEVELOPMENT (ICTD) LAB	<p><b>Research Assistant</b>, <i>April 2014-June 2017, Seattle, WA</i></p> <ul style="list-style-type: none"> <li>➢ Developed Respeak, an Android application that empowered low-income, blind users in India to earn an income by performing audio-based crowdsourcing tasks.</li> <li>➢ System demonstrated a 6X improvement in Hindi and 3X improvement in Indian-accented English ASR transcription accuracy.</li> <li>➢ Advised by Professor Richard Anderson and Aditya Vashistha (now Assistant Professor at Cornell University).</li> </ul>
ALLEN INSTITUTE FOR ARTIFICIAL INTELLIGENCE (AI2)	<p><b>Visiting Undergrad Researcher</b>, <i>March 2015-June 2015, Seattle, WA</i></p> <ul style="list-style-type: none"> <li>➢ Explored adversarial perturbations of fourth grade science questions in order to increase or lower their difficulty for a Q&amp;A model.</li> <li>➢ Advised by Been Kim (now at Google Brain).</li> </ul>

## PUBLICATIONS

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- AutoNLU : Detecting, root-causing, and fixing NLU model errors** PREPRINT  
Pooja Sethi, Denis Savenkov, Feroz Arabshahi, Jack Goetz, Micaela Tolliver, Nicolas Scheffer, Ilknur Kabul, Yue Liu, Ahmed Aly
- 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** UW HONORS THESIS  
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

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- 2017 **Facebook ParlAI Research Grant** *Wrote research proposal and won \$19,800 grant for UW NLP group for work on conversational question generation.*
- 2017 **Outstanding Computer Engineering Senior Award** *Awarded to top computer engineering senior in graduating class based on academic merit, research, and leadership.*
- 2017 **Best Undergraduate Honors Thesis Award** *Awarded to top computer science & engineering senior thesis in graduating class.*
- 2016 **Society of Women Engineers, Outstanding Engineer Award** *Nominated by the UW computer science & engineering department for university-wide award.*
- 2016 **TUNE House Scholarship** *1-year scholarship for women at UW in technical disciplines 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 **Admitted to Massachusetts Institute of Technology (MIT) class of 2017, Early Action** *(declined)*
- 2013 **Granite Falls High School Valedictorian**

## MENTORSHIP

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- **2021** Intern manager for Jeffrey Chiu at Facebook Reality Labs (cont. undergrad studies at Harvard University)
- **2021** Mentor for Arushi Bhatia for Duke Technology Scholars Program (cont. undergrad studies at Duke University)
- **2020** Mentor for Natalie Tarn for Duke Technology Scholars Program (cont. undergrad studies at Duke University)
- **2018** Intern manager for Zoe Papakipos at Facebook Reality Labs (now Research Engineer at Facebook AI Research, Paris)