# Srini Iyer

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## Personal Profile

I am a graduate student in the NLP group at the Paul G. Allen School of Computer Science & Engineering at the University of Washington. I am advised by Luke Zettlemoyer and Alvin Cheung. My main interests lie in joint modeling of natural language (NL) and general purpose source code, by learning from vast amounts of web data. I am excited about using NL to code models to 1) help programmers write efficient and readable code quickly, and, 2) help users interact with computer programs/databases/voice assistants.

## Education

**Doctor of Philosophy, Computer Science & Engineering** 2014 - 2019 (expected)
University of Washington, WA
Advised by Luke Zettlemoyer & Alvin Cheung
Thesis: *Learning to Map Natural Language to General-Purpose Source Code*

**Master of Science, Computer Science** 2010 - 2013
Stanford University, CA

**Bachelor of Engineering, Computer Science** 2005 - 2009
VES Institute of Technology (VESIT), India

## Publications (Natural Language Processing)

1. **Srinivasan Iyer**, Alvin Cheung, and Luke Zettlemoyer. Learning programmatic idioms for scalable semantic parsing. In *Under Review (Long Paper)*, 2019
2. **Srinivasan Iyer** and Mike Lewis. Identifying perspectives in online news using weakly supervised generative models. In *Under Review (Long Paper)*, 2019
3. Rajas Agashe, **Srinivasan Iyer**, and Luke Zettlemoyer. Jupyter: A large scale distantly supervised dataset for open domain context-based code generation. In *Under Review (Long Paper)*, 2019
4. **Srinivasan Iyer**, Ioannis Konstas, Alvin Cheung, and Luke Zettlemoyer. Mapping language to code in programmatic context. In *EMNLP (Long Paper)*, Brussels, Belgium, Nov 2018
5. Alane Suhr, **Srinivasan Iyer**, and Yoav Artzi. Learning to map context-dependent sentences to executable formal queries. In *NAACL, 2018 (Long Paper)*, New Orleans, June 2018 [**Outstanding Paper**]
6. **Srinivasan Iyer**, Ioannis Konstas, Alvin Cheung, Jayant Krishnamurthy, and Luke Zettlemoyer. Learning a neural semantic parser from user feedback. In *ACL (Long Paper)*, Vancouver, Canada, July 2017
7. Ioannis Konstas, **Srinivasan Iyer**, Mark Yatskar, Yejin Choi, and Luke Zettlemoyer. Neural amr: Sequence-to-sequence models for parsing and generation. In *ACL (Long Paper)*, Vancouver, Canada, July 2017
8. **Srinivasan Iyer**, Ioannis Konstas, Alvin Cheung, and Luke Zettlemoyer. Summarizing source code using a neural attention model. In *ACL (Long Paper)*, Berlin, Germany, August 2016

## Tutorials, Workshops, Teaching & Reviewing

1. Matt Gardner, Pradeep Dasigi, **Srinivasan Iyer**, Alane Suhr, and Luke Zettlemoyer. Neural semantic parsing. *Proceedings of ACL 2018, Tutorial Abstracts*, pages 17–18, 2018
2. Antoine Bosselut, Marjan Ghazvininejad, **Srinivasan Iyer**, Urvashi Khandelwal, Hannah Rashkin, Asli Celikyilmaz, and Thomas Wolf. Organized the workshop on methods for optimizing and evaluating neural language generation. *NeuralGen at NAACL*, 2019
3. Reviewed for **NLP Venues:** *ACL, NAACL, EMNLP, CONLL, COLING, ICLR* **PL Venues:** *PLDI, TSE* **Db venues:** *SIGMOD, WWW* **Bioinformatics Venues:** *BioInformatics, Computer Methods and Programs in Biomedicine, and Expert Opinion on Drug Safety*
4. Teaching Assistant for *Natural Language Processing*, CSEP517, at UW (Fall 2018) and *Introduction to Data Management*, CSE 344, at UW. (Fall 2014)
5. Undergraduate Tutor for *Foundations of Computing II, CSE 312* and *Introduction to Artificial Intelligence, CSE 473*, at UW.

## Work Experience

**Facebook AI Research (FAIR), Seattle**, *Part-time Research Contractor* May '18 to present
Projects related to mapping natural language to general-purpose source code

**Facebook AI Research (FAIR), Menlo Park**, *Research Intern* Jan '18 to Apr '18
Weakly supervised, neural generative methods to identify political perspectives in online news.

**Allen Institute for Artificial Intelligence (AI2), Seattle, WA**, *Research Intern* Oct '16 to Apr '17
Learning joint models of language and code for automatic generation of SQL queries for arbitrary database schemas. We proposed a three dimensional approach based on crowdsourcing, deep neural models and interactive query refinement.

**Facebook, Menlo Park, CA**, *Software Engineer* Apr '13 to Sep '14
Worked in the Ads Ranking Team on ad click through rate (CTR) and conversion rate prediction using machine learning models. Also worked on feature engineering, ad retrieval optimization, and ad ranking metrics.

**Department of Biomedical Informatics (BMIR), Stanford University**, *Research Assistant for Nigam Shah* Jan '11 to Mar '13
Mining Electronic Health Records (EHRs) to learn adverse drug reactions and drug-drug interactions.

**Facebook, Palo Alto, CA**, *Software Engineering Intern* Jun '11 to Sep '11
Worked with the Data Freeway/Scribe team on quantifying data-loss in the event logging pipeline.

**Halston Software Solutions, Mumbai, India**, *Software Engineering Intern* Feb '10 to Jul '10
Programmed device drivers and other system software for Linux and MAC OS X.

**Microsoft, Hyderabad, India**, *Software Engineering Intern* Jun '08 to Aug '08
Created tools to automate the application of patches on remote servers using WMI and Powershell. Also, created several server management utilities.

## Selected Publications (Bio-Informatics)

1. **Srinivasan Iyer**, Rave Harpaz, Paea LePendu, Anna Bauer-Mehren, and Nigam H Shah. Mining clinical text for signals of adverse drug-drug interactions. *Journal of the American Medical Informatics Association*, 21(2):353–362, 2014
2. **Srinivasan Iyer**, Paea LePendu, Rave Harpaz, Anna Bauer-Mehren, and Nigam H Shah. Learning signals of adverse drug-drug interactions from the unstructured text of electronic health records. *AMIA Summits Transl Sci Proc*, 18:83–87, 2013
3. Paea LePendu, **Srinivasan Iyer**, Anna Bauer-Mehren, Rave Harpaz, Jonathan M Mortensen, Tanya Podchiyska, Todd A Ferris, and Nigam H Shah. Pharmacovigilance using clinical notes. *Clinical pharmacology & therapeutics*, 93(6):547–555, 2013
4. Paea LePendu, **Srinivasan Iyer**, Cédrick Fairon, and Nigam H Shah. Annotation analysis for testing drug safety signals using unstructured clinical notes. *Journal of biomedical semantics*, 3(1):1, 2012
5. Kenneth Jung, Paea LePendu, William S Chen, **Srinivasan Iyer**, Ben Readhead, Joel T Dudley, and Nigam H Shah. Automated detection of off-label drug use. *PloS one*, 9(2):e89324, 2014
6. Sandy H Huang, Paea LePendu, **Srinivasan Iyer**, Ming Tai-Seale, David Carrell, and Nigam H Shah. Toward personalizing treatment for depression: predicting diagnosis and severity. *Journal of the American Medical Informatics Association*, 21(6):1069–1075, 2014
7. Yi Liu, Paea LePendu, **Srinivasan Iyer**, and Nigam H Shah. Using temporal patterns in medical records to discern adverse drug events from indications. *AMIA Summits Transl Sci Proc*, 2012:47–56, 2012

## Academic Achievements and Scholarships

- **Siebel Scholar**, Class of 2012 – awarded annually for academic excellence and demonstrated leadership to 85 top students from the world's leading graduate schools.
- **First Place in the University of Mumbai**, in the 2nd semester of the BE undergraduate program.
- **Highest GPA** in the Computer Science undergraduate program at VESIT over four years. (2005-2009)
- **Dorabji Tata Scholar**, which is given annually to a selected few students in India for higher studies abroad.
- **JN Tata, KC Mahindra, RD Sethna & Maneckji Shirinbai Scholar** - awarded for higher studies abroad. (2010)
- **Sir Ratan Tata Scholar** for three years (2006-2009) - Awarded for academic excellence
- **Sir JRD Tata Scholar** - Awarded for academic excellence (2006-07).
- Colonel Patrick Scholar, Dewan Khanchand Jechandral Mirchandani Scholar and Chettanram G. Abichandani Scholar. (2006)
- Two year fellowship for my High School studies from the SIES College of Arts, Science and Commerce. (2003-2005)

## Other Interests

- Hiking - I've visited over 40 national parks within the United States
- Mountaineering - Some recent ones are Mt. Hood, Mt. Whitney, Mt. Adams and Mt. Shasta
- Photography - I take pictures of nature and landscapes (http://500px.com/sriniiyer1)