

John Li

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<https://john-ml.github.io/>

EDUCATION	Northeastern University , Boston, Massachusetts, USA	
	Ph.D. Computer Science	Sep 2021 – Now
	Princeton University , Princeton, New Jersey, USA	
	M.S.E. Computer Science	Sep 2019 – May 2021
	• Cumulative GPA: 4.0 / 4.0	
	A.B. Neuroscience, High Honors	Sep 2015 – May 2019
	• Minor in Computer Science	
	• Cumulative GPA: 3.86 / 4.0	
RESEARCH EXPERIENCE	Northeastern University	Sep 2021 – Now
	• Advisors: Amal Ahmed and Steven Holtzen	
	• Working on a logic for reasoning about feature-rich probabilistic programming languages.	
	Microsoft Research	Jun 2021 – Aug 2021
	• Supervisors: Tahina Ramananandro and Nikhil Swamy	
	• Built a model of C structs and unions in F* and used it to validate rules for reasoning about struct-and-union-manipulating C programs in the concurrent separation logic Steel.	
	Princeton University	Sep 2019 – May 2021
	• Advisor: Andrew Appel	
	• Built a tool to derive efficient program transformations from specifications, and used it automate the verification of several of CertiCoq’s backend optimization passes. Helped prove CertiCoq’s closure conversion pass correct. Proved various technical lemmas about name binding for CertiCoq’s intermediate language.	
	HRL Laboratories	Jun 2019 – Aug 2019
• Supervisors: Aleksey Nogin and Michael Warren		
• Learned about dynamic differential logic and differential invariants and experimented with finding invariants of cyber-physical systems using machine learning as part of the assured autonomy group.		
Princeton University	Oct 2018 – Jan 2019	
• Advisor: Andrew Appel		
• Learned about the use of logical relations for compiler correctness and proved CertiCoq’s uncurrying pass correct.		
TEACHING EXPERIENCE	Preceptor , Princeton University	Sep 2020 – Dec 2020
	Functional Programming (COS 326)	
	Led weekly precepts, graded assignments, and held office hours	
	Teaching Assistant , Princeton University	Feb 2020 – May 2020
Programming Languages (COS 510)		
Graded assignments and held office hours		

Preceptor, Princeton University

Sep 2019 – Jan 2019

Introduction to Programming Systems (COS 217)

Led weekly precepts, graded assignments, and held office hours

SKILLS

Functional programming (Coq, Haskell, OCaml, Standard ML), scripting languages (Python, JavaScript), Prolog, \LaTeX , comfortable with Unix environment and Git

AWARDS

Siebel Scholarship

2020

Scholarship towards my final year of study at Princeton University.