AYAKA YORIHIRO

ay436@cornell.edu

RESEARCH INTERESTS

Software Engineering, Programming Languages, and Automata Theory, with an emphasis on Specifications for Runtime Verification.

EDUCATION

Cornell University   *September 2020 - Present*
Ph.D. in Computer Science.
Advisor: Owolabi Legunsen.

Swarthmore College   *September 2016 - May 2020*
B.A., Computer Science and Music (double major).
Elected Phi Beta Kappa.
Advisor: Zachary Palmer.

HONORS AND AWARDS

NSF GRFP Honorable Mention   *2022*

Cornell University Outstanding Teaching Award   *2022*

Cornell University Fellowship   *2020*

Lockwood Fellowship, Swarthmore College   *2020*

PUBLICATIONS

A Set-Based Context Model for Program Analysis   *APLAS 2020*
Leandro Fachinetti, Zachary Palmer, Scott F. Smith, Ke Wu, Ayaka Yorihiro.
Asian Symposium on Programming Languages and Systems (APLAS).

PROFESSIONAL EXPERIENCE

Research Assistant   *Summer 2021, Jan - Aug 2022*
Cornell University, Ithaca, NY.

Research Assistant   *Jan - Dec 2019*
Swarthmore College, Swarthmore, PA.

C++ Engineering Intern   *Summer 2018*
Electronic Arts, Orlando, FL.

Intern, Sustainability Offices   *Summer 2017*
PwC Japan, Tokyo, Japan.

TEACHING EXPERIENCE

Guest Lecturer for CS6156: Runtime Verification   *Spring 2023*
Applicating of Runtime Verification utilizing the Bitcoin blockchain.
Cornell University, Ithaca, NY.

Teaching Assistant for CS5154: Software Testing   *Fall 2021, Fall 2022*
Cornell University, Ithaca, NY.

Teaching Assistant for Programming Languages *Spring 2020*
Swarthmore College, Swarthmore, PA.
Teaching Assistant for Theory of Computation *Spring 2020*
Swarthmore College, Swarthmore, PA.
Grader for Algorithms *Fall 2019*
Swarthmore College, Swarthmore, PA.

Grader for Introduction to Computer Systems *Spring 2018, Spring 2019, Fall 2019*
Swarthmore College, Swarthmore, PA.
Student Representative, Faculty Candidate Search Committee *Spring 2019*
Swarthmore College, Swarthmore, PA.

Student Mentor for Introduction to Computer Science *Fall 2018*
Swarthmore College, Swarthmore, PA.

Grader for Data Structures and Algorithms *Fall 2017*
Swarthmore College, Swarthmore, PA.

PRESENTATIONS

Towards Better Specifications for Runtime Verification *Summer 2022*
Joint UT-Cornell Software Engineering Seminar

Towards Better Specifications for Runtime Verification *Fall 2021*
Programming Languages Discussion Group Retreat
Cornell University, Ithaca, NY.

Automatic Repair of Regular Expressions (Pan, Hu, Xu, D'Antoni) *Spring 2021*
Programming Languages Discussion Group
Cornell University, Ithaca, NY.

Quickly Detecting Relevant Program Invariants (Ernst, Czeisler, Griswold, Notkin) and Leveraging Test Generation and Specification Mining for Automated Bug Detection with False Positives (Pradel, Gross) *Spring 2021*
Great Works in Programming Languages Seminar
Cornell University, Ithaca, NY.

Context-Sensitive Data-Dependence Analysis via Linear Conjunctive Language Reachability (Zhang, Su) *Fall 2020*
Programming Languages Discussion Group
Cornell University, Ithaca, NY.

MENTORING

At Cornell, I am mentoring two wonderful undergraduate students:
Tito Maresca

Alan Han

SERVICE

Co-organizer, Joint UT-Cornell Software Engineering Seminar *Summer 2022*

Department of Computer Science, Ph.D. Mentorship Czar *Spring 2022 - Present*
Cornell University, Ithaca, NY.

CS Ph.D. Student Visit Day Student Panelist *Spring 2022*
Cornell University, Ithaca, NY.

CS Ph.D. Student Visit Day Organizer *Spring 2021*
Cornell University, Ithaca, NY.

CS Ph.D. 2020 Cohort Zoom Social Hour Organizer *Fall 2020 - Spring 2021*
Cornell University, Ithaca, NY.

SKILLS AND INTERESTS

Programming Languages	Java, Python, OCaml, C/C++, Bash, LaTeX
Languages	English (Fluent), Japanese (Fluent)
Interests and Activities	Viola, Orchestra, Chamber Music, Special Needs