

Alan Hu

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🌐 alan-j-hu

in Alan Hu

Availability: July –
December 2022

Education

Candidate for Bachelor of Science **September 2020–Present**
in Computer Science, *Expected May 2024*.

Northeastern University, Khoury College of
Computer Sciences, Boston, MA

GPA: 3.9/4.0

Coursework: Algorithms and Data, Object-Oriented Design, Fundamentals of Computer
Science 1 & 2 Accelerated

Awards: National Merit Scholarship 2020, Dean's List 2020–2021

Technologies

Programming Languages: Modern C++ (C++17), C, Java, Python 3, OCaml,
x86-64 Assembly, Lean 3, Agda

Software: Emacs, Git, LLVM, Valgrind, Unix and Linux

Projects

Milner. **May 2020–October 2020**

- Designed a programming language and wrote a compiler for it using OCaml and LLVM
- Implemented a typechecker to verify program correctness

Parser generator. **April 2017–May 2018**

- Developed a parser generator in C++ to translate grammar specifications into programs
- Self-studied the LR and LALR parser algorithms by reading compiler textbooks

Work Experience

Intern, Huaxia Chinese School at Plainsboro. **June–August 2020**

- Taught elementary-aged children programming in Python 3
- Guided exercises and projects following a provided curriculum

Additional Experience

Open Source Contributor. **2017–Present**

- Contributed bug fixes and features to open source projects on GitHub (@alan-j-hu)
- Improved major libraries in the OCaml ecosystem

Programming Language Theory Reading Group **January–April 2021**
Student, Northeastern University.

- Studied *Types and Programming Languages* and research papers
- Reviewed theory with Professor Amal Ahmed and five other students

Tutor, Independent Volunteer. **July–August 2019**

- Taught elementary-aged children programming in Python 3
- Administered activities from the book *Python for Kids*.

Interests

Programming Language Theory, Compilers, Static Analysis, Mathematics