Ashvin Ranjan

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Education

University of Washington | Expected June 2027   **GPA: 3.97/4.0**

Bachelor of Science in Computer Science
- Completed: Introduction to Computer Programming I, II, & III, Hardware/Software Interface, Foundations of Computing I, Data Structures & Algorithms, Software Design & Implementation.
- Complete by June 2026: Foundations of Computing II, Shallow/Deep Processing Techniques for NLP (Master's courses), Advanced Statistical Methods in NLP (Master's course).

Skills

Languages: Typescript, Javascript, Python, Rust, Go, Java, C#
Next.js and React Frontend development
Typescript, Rust, and Go backend development

Experiences

CLMBR | Prof. Steinert-Threlkeld's Computational Linguistics research lab.

Undergraduate Researcher   *November 2024 - Present*
- Working on research toolkits for semantic typology in Python, helped with creating expression samplers with probabilistic models.

Inspirogram | A Computer Science education non-profit.

Software Engineering Intern   *May 2022 - January 2023*
- Volunteered to help develop the website and write courses for the non-profit, which would be used to teach students in Tanzania.
- Utilized Next.js to help develop the website. Wrote courses on Unity and React.js software development and made presentations.

Outreach | A marketing and outreach company.

Software Engineering Intern   *July 2022 - August 2022*
- Utilized Go to develop a backend and command line interface to create company GitHub repositories with custom templates.
- Translated Ruby code into Go and created a custom YAML specification to allow for the creation of custom repository templates.

Software Engineering Intern   *June 2021 - August 2021*
- Collaborated with the calendaring experiences team in order to solve bugs in the calendar of the Next.js-based company website.
- Created outline for additional sections of the company website involving image processing and uploading by users using Next.js.

Backbone | A mobile gaming peripherals company.

Software Engineering Intern   *March 2020 - August 2020*
- Created an iOS application with Swift to send live stream data to a computer via USB to an OBS plugin for recording or streams.

Projects

EMP | github.com/Ashvin-Ranjan/EMP   *September 2021 - January 2022*
- Designed a bytecode schema for data packaging that is 12% more efficient than Non-Binary Tags and Javascript Object Notation.
- Developed a library and command line interface for the schema in Rust, published on crates.io with more than 5,400 downloads.

Disadus | github.com/disadus   *August 2021 - April 2022*
- Produced a learning management system with other students reaching over 300 registered users and over 10 student communities.
- Architected and developed the Next.js website and Typescript backend which integrated MongoDB, node mailer, and Firebase.

Skyblock Tools | github.com/skyblock-tools   *July 2021 - September 2022*
- Collaborated with an international team of seven developers to create a Minecraft modification with web and Discord integration.
- Reduced server processing time by 50% by refactoring Python-based backend code into Rust.
- Reached over 3,000 active users by the end of the project lifespan with over 60 users paying.

N | https://github.com/nbuilding/N-lang   *December 2020 - September 2022*
- Published documentation for the strictly-typed programming language that involved features such as generics, currying, and async.
- Developed an interpreted branch with Python and a transpiled to Javascript branch in Typescript in a team with other developers.