Nicolas S. Montanaro

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Work experience

- **Sonara Health** — Remote
  Senior software engineer — *June 2022 - present*
  - Designed and implemented a relational database structure to accurately record and analyze user activity history.
  - Planned and executed a framework for collecting patient demographic information.
  - Bridged our web application to Zendesk in an effort to shift operational burden from opioid treatment centers to our internal customer success team.
  - Collaborated with team to rapidly patch a critical production bug, minimizing service outage impact.
  - Developed a custom measurement-based care framework, combining UI components, database designs, and data collection standards, enabling the collection of voluntary patient information aligned with Sonara's specific requirements as an alternative to off-the-shelf solutions.

- **Foyer, Inc. (defunct)** — Trumbull, CT
  Technology director — *May 2017 - June 2022*
  - Assumed responsibility for overall direction and technical implementation for the Foyer ML platform as the company grew from 2 employees to 8.
  - Planned, designed, implemented and maintained a datastore and REST API for real estate metadata.
  - Designed and programmed an iOS application for real estate listing creation and automatic feature detection. Feature extraction was performed in real-time as a video of a home was taken.

- **Recurse Center** — New York, NY
  Participant — *February 2018 - May 2018*
  - Participated in a self-directed, project-based programming retreat, where I created a Game Boy emulator in Go and delivered a presentation on the implementation details.

- **Intel** — Santa Clara, CA
  Software application engineer — *January 2015 - December 2015*
  - Analyzed the performance of 3D camera hardware and software on Intel architecture prior to release.
  - Developed and tested mobile performance analysis tools for Android, iOS, and Windows-based tablets for Intel lab personnel.
  - Received an award for the identification and resolution of proprietary software issues which resulted in the on-time delivery of a performance monitoring tool to Intel labs.

Open source projects

- **Halken**
  Go — *github.com/99z/halken*
  - Halken is a Game Boy emulator written in Go.
  - Created as an exercise in low-level programming and to gain a better understanding of computer architecture while at the Recurse Center.

- **Independent study in code clone detection techniques**
  Java — *nicolasmontanaro.com/indstudy.pdf*
  - Implemented a simplified version of the GPLAG algorithm for code clone detection.
  - Compared GPLAG against widely-used tools for plagiarism detection in student code submissions.
  - Benchmarked and analyzed tokenization vs. subgraph isomorphism detection techniques for code clone detection.

Education

- **Rochester Institute of Technology** — Rochester, NY
  Computer Science — *August 2012 - May 2017*