Daman Morris

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EDUCATION

Rochester Institute of Technology, Rochester, NY

- BS in Computer Science — Aug 2016 – Apr 2021
- MS in Computer Science — Aug 2020 – Apr 2021
  - Classes: Found. of Intelligent Systems, Intro. to Computer Vision, Science & Analytics of Speech, Game Theory, Advanced Linear Algebra, Abstract Algebra, Programming Language Theory, Combinatorial Computing
  - Cumulative GPA: 3.5 / 4.0 (Undergraduate), 4.0 / 4.0 (Graduate)

EXPERIENCE

Mindex Technologies Inc., Rochester, NY

- Hybrid Engineer (Contractor at Paychex) — May 2021- Present
  - Worked on enterprise-scale systems to fulfill feature requests and otherwise extend the functionality of existing systems. Areas worked on include: legacy SQR reports, REST API development and extension for microservices, and some front-end development with Angular.
  - Independently authored an extension to an in-house Python testing library to simplify writing common queries safely, with named access to columns in result sets rather than using tuple indices.

RIT CS Department, Rochester, NY

- Research & Development Assistant — Sep 2019 – May 2020
  - Planned and developed a system for zero-knowledge authentication in a multi- factor context, with extensible support for a variety of protocols, including Feige-Fiat-Shamir.
  - Extended existing zero-knowledge protocols with modern principles, intended to support such solutions as no-trust architecture or continuous authentication, for use in critical environments.
  - Produced two stand-alone libraries to support the above, both of which are extensible and configurable depending on the needs of the organization. Proprietary; all associated IP is wholly owned by REDCOM Laboratories, Inc.
- Developer, MLton@RIT — Jun 2018 – May 2019
  - Worked to improve the whole-program SML compiler, MLton.
  - Simplified the internal representation of arithmetic primitives by making checked primitive operations into predicates, similar to how other modern compilers handle such operations.
  - Amended and added several optimization passes to keep performance on par with the older system; in some cases, speedups of up to 50% performance were observed.
- Grader, Concepts of Computer Systems — Jan 2018 – May 2019
  - Graded tests involving low-level computer organization and assembly language.

SKILLS

- Programming languages: Python, Java, SML, C[++], Haskell, Lua, Rust (LaTeX, HTML, CSS)
- Disciplines: Computer Vision & Image Processing, Functional Programming, Linguistics, Machine Learning, Data Mining & Analysis, Systems Programming, Database Programming
- Technologies: OpenCV, Pandoc, H2, SQL, Inkscape, GNU Image Program

PROJECTS

Pangloss

- Pandoc filter for interlinear glosses (a type of example used in grammars and other linguistic documents with a sentence, its constituent parts, and an English translation on separate lines).
- Allows pandoc example lists to be used to generate interlinear glosses in PDF with the LaTeX gb4e package or HTML with Leipzig.js. Written in Python.

Lexis

- Standalone tool to facilitate the creation of dictionaries with Pandoc and markdown.
- Allows dictionaries to be specified as Markdown lists, either in one file or multiple files by letter, and supports arbitrary collation orders for different languages. Written in Python.

AWARDS & SCHOLARSHIPS

- Dean's List, Spring 2017 through Fall 2018, Rochester Institute of Technology — 2017 – 2018
  For attaining a semester undergraduate GPA of at least 3.4 with no grades of 'D', 'F', or incomplete.
- Presidential Scholar Award, Rochester Institute of Technology — Jan 2016
  For exceptional academic performance and strong entrance exam scores.

INTERESTS

Conlanging, reading, typography, graphic design, piano, classical music.