

# David Oniani

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For my research papers, projects, and full CV, please visit <https://www.davidoniani.com>.

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## Education

08/2017 – 06/2021 (expected) **B.A. Computer Science, Mathematics, GPA 3.82, CS GPA 3.935, MATH GPA 3.740**, [Luther College](#), Decorah, IA.

**Relevant courses:** Machine Learning, Applied Statistics (I and II), Data Modeling and Querying, Linear Algebra, Advanced Algorithms and Data Structures, Programming Languages, Operating Systems and Architecture, Object-oriented programming with C++, Models of Computation, Topology, Real Analysis, Game Theory.

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## Technical Skills

Languages: **Advanced:** Python, Haskell, Shellscript (POSIX-compliant), HTML, CSS.

**Proficient:** R, Rust, Java, SQL, Javascript, TypeScript, C/C++, Zsh.

**Acquainted:** Standard ML, Lua, Scheme, VBA, C#, Batch, Prolog.

Development Tools: macOS, Linux, kitty, Neovim, VS Code, Git, Jekyll, WordPress, Virtual Box, GitHub, Jupyter, SageMath, RStudio, Cron, Travis CI, Blender, Unity, Adobe Illustrator, ZBrush, Substance Painter, 3DS Max.

Other Skills:  $\text{\LaTeX}$ , Technical Writing, Markdown.

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## Work Experience

02/2020 – 09/2020 **R&D Intern**, [Mayo Clinic, Kern Center](#), Rochester, MN.

- Major-authored several papers that got accepted at world's major AI and biomedical informatics conferences/journals (ACM-BCB, JAMIA, etc). Publications available on [my website](#).
- Created automated COVID-19 screening tool based on decision trees to assist nurses and physicians.
- Reviewed over 15 state-of-the-art AI/NLP papers.
- Presented papers/projects and communicated with multidisciplinary teams.
- Worked directly under [Dr. Feichen Shen](#) and [Dr. Yanshan Wang](#) in the division of [Dr. Hongfang Liu](#).

08/2018 – 12/2019 **Teaching Assistant**, [Luther College](#), Decorah, IA.

Fall 2020 [Computational Models \(CS 260\)](#) with [Dr. Alan K. Zaring](#).

Fall 2019 [Object-Oriented Programming With Java \(CS 252\)](#) with [Dr. Shafqat A. Shad](#).

Fall 2018 [Introduction to Computer Science \(CS 150\)](#) with [Dr. Alan K. Zaring](#).

06/2018 – 12/2018 **Web Programmer**, [Luther College, ITS - Software Development](#), Decorah, IA.

- Contributed to new [Norse Hub](#) web system which has successfully replaced [my.luther.edu](#).
- Communicated with team, wrote reports, and attended weekly SCRUM meetings.
- Conducted performance & load testing using JMeter and presented results.
- Created data visualization tool utilizing JavaScript DOM.

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## Research Experience

Fall 2019 **Directed research in programming languages with Dr. Alan K. Zaring.**

- Extended CCL language, wrote type-checking rules, made key contributions to type system.

Summer 2019 **Collaborative research on visual persuasion with professor Richard K. Merritt.**

- Trained convolutional neural networks for image recognition using PyTorch.
- Wrote Python scripts for PDF image/text extraction and data cleanup.
- Performed extensive set of both statistical and textual analyses using state-of-the-art algorithms.

Summer 2018 **Collaborative research on unit testing with Dr. Roman Yasinovskyy.**

- Automated feedback generation for C++ programming course.
- Redesigned and significantly improved SQL and relational algebra solution checker.
- Designed testable practice problems for algorithms and data structures course.

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## Honors and Awards

- 2018, 2019 Recipient of Two Luther College Dean's Office Summer Research Awards
- All Semesters Dean's List Recipient, [Luther College](#)
- 2017 Recipient of Highly Competitive Xie Math Scholarship, awarded by Math Department
- 2017 Selected Start-up Project ([UnleashAR](#)), TOP 200, [Wolves Summit](#) (largest start-up investment/networking conference in Europe)
- 2016 Gold Medal for Academic Excellence, [Ministry of Education and Science of Georgia](#)
- 2011 – 2016 Five-time Finalist (TOP 35 out of over 3,000 participants), [National Mathematics Olympiad of Georgia](#)