

Visit <https://www.davidoniani.com> for my papers, projects, and more!

## Education

- 08/2017 – 06/2021 **B.A. Computer Science, Mathematics**, [Luther College](#), Decorah, IA.  
Double major in mathematics and computer science. Academic advisor: Dr. Alan K. Zaring.
- 10/2016 – 12/2016 **Sales MBA Diploma**, [International Sales Institute](#), Tbilisi, Georgia.  
Rigorous trainings in inbound & outbound sales, merchandising, and marketing operations.
- 09/2011 – 07/2016 **High School Diploma**, [Komarovi Campus School](#), Tbilisi, Georgia.  
Graduated with the highest honors. Represented the school in various math and physics olympiads.

## Work Experience

- 02/2020 – 05/2020 **R&D Intern**, [Mayo Clinic, Kern Center](#), Rochester, MN.
- Co-wrote (major author) a paper regarding COVID-19 that got accepted at the world's most prestigious biomedical informatics journal ([JAMIA](#)).
  - Made significant contributions in COVID-19-related projects, resulting in several manuscripts and reports.
  - Worked directly under [Dr. Feichen Shen](#) and [Dr. Yanshan Wang](#) in the division of [Dr. Hongfang Liu](#)
  - Developed and applied state-of-the-art AI and NLP techniques in order to facilitate continuous improvement of patient experience.
  - Presented papers/projects and communicated with multidisciplinary teams.
- 08/2018 – 12/2019 **Preceptor**, [Luther College](#), Decorah, IA.
- 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](#).
- Held help hours and assisted students with homework assignments.
  - Attended all classes and answered students' questions during the labs.
- 06/2018 – 12/2018 **Web Programmer**, [Luther College, ITS - Software Development](#), Decorah, IA.
- Contributed to the brand new [Norse Hub](#) web system which has successfully replaced [my.luther.edu](#).
  - Communicated with the team, wrote reports, and attended weekly SCRUM meetings.
  - Conducted performance & load testing using JMeter and presented the results.
  - Created a data visualization tool utilizing JavaScript DOM.
  - Migrated from the Microsoft to the Linux server and refactored the Python code.
- 03/2017 – 07/2017 **Co-Founder and CEO**, [Warbler](#), Tbilisi, Georgia.
- Spearheaded the team of young and enthusiastic software developers.
  - Processed five-year data (180k+ rows) of UNE (Unified National Exams of Georgia).
  - Designed the logo; built the pitch, presentation, and the WordPress-based website for the start-up.
  - Created a social media chatbot using Chatfuel API and set up Zoho mailing system.
- 11/2016 – 09/2017 **Freelance Graphic Designer**, [Behance \(not affiliated\)](#).
- Designed logos and posters for various companies in the local and the global market.
  - Instructed and taught the basics of design to several aspiring graphic designers.
- 10/2016 – 06/2017 **Sales Representative and Marketing Coordinator**, [Insta LLC](#), Tbilisi, Georgia.
- Partook in the complete rebuild and redesign of sales and marketing departments.
  - Contributed to the CRM, was responsible for data gathering, filtering, and entry.
  - Managed social media, responsible for targeted campaigns, copywriting, and image-editing.
  - Cold-called and contacted clients to build and maintain long-term relationships.
  - Attended a number of staff meetings and new product/partner presentations.

## Research Experience

- Fall 2019 **Directed research in programming languages with Dr. Alan K. Zaring.**
- Redesigned and made a few significant contributions to the type system.
  - Introduced the notion of container types to the language.
  - Designed relational operators for container types.
- 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 an extensive set of both statistical and textual/NLP 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 the algorithms and data structures course.

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## Volunteer Experience

- 2016 [Transparency International Georgia](#)  
2016 [Khan Academy](#)

*Observed Georgian Parliamentary Elections*  
*Subtitled Georgian and Russian videos*

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## Activities and Memberships

- 2020 - Present Member, Pi Mu Epsilon (Math Honor Society)  
2017 - Present Member, Association for Computing Machinery (ACM)

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## Honors and Awards

- 2017 – 2020 Multiple Competitive Scholarships, [Luther College](#)  
2018, 2019 Recipient of 2 Luther College Dean's Office Summer Research Awards, [Luther College](#)  
All Semesters Dean's List Recipient, [Luther College](#)  
2017 Selected Start-up Project ([UnleashAR](#)), TOP 200, [Wolves Summit](#)  
2016 Gold Medal for Academic Excellence, [Ministry of Education and Science of Georgia](#)  
2011 – 2016 Five-time Finalist (7<sup>th</sup> Place, TOP 10, in 2014), [National Mathematics Olympiad of Georgia](#)  
2014 IMO & IPHO Nominee, [Ministry of Education and Science of Georgia](#)  
2011 – 2016 Won a number of various mathematical olympiads, Varied

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## Language Proficiency

- English, Native
- Georgian, Native
- Russian, Native
- Japanese, Elementary
- Mingrelian, Native

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## Technical Skills

- Languages: Python, Haskell, Shellsript (POSIX-compliant), Rust, JavaScript, Java, R, C++, C, HTML, CSS, TypeScript, Bash, Zsh, Vimscript, SQL, Standard ML, Scheme, VBA, Lua, C#, CCL, Batch script, Prolog.  
Development macOS, Linux, kitty, Neovim, VS Code, Git, Jekyll, WordPress, Virtual Box, GitHub, Jupyter, SageMath,  
Tools: RStudio, Cron, Travis CI, Blender, Unity, Adobe Illustrator, ZBrush, Substance Painter, 3DS Max.  
Other Skills:  $\text{\LaTeX}$ , Technical Writing, Markdown.

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## Other Courses and Certificates

- 2019 [Machine Learning & AI: Advanced Decision Trees](#), LinkedIn Learning  
2019 [NLP with Python for Machine Learning Essential Training](#), LinkedIn Learning  
2018 [Machine Learning Crash Course](#), Google  
2017 [Think About It](#), Campus Clarity  
2017 [How to Rock Social Media](#), LinkedIn Learning  
2016 [South Caucasus Leadership Forum Participant](#), GSFL, Friedrich Naumann Foundation  
2016 [Parliamentary Elections Observation Mission Training](#), Transparency International Georgia

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## Papers, Reports, and Poster Presentations

- 2019 [Textual and Statistical Analysis of Russian IRA Facebook Advertisements](#)  
2019 [Type Inference Rules For Container Types in CCL](#)  
2019 [The Topology of Robotic Configuration and Motion Planning](#)  
2018 [Unit testing frameworks in the classroom \(applied research report\)](#)  
2018 [Photography as a socially influential medium in Jennifer Baichwal's \*Manufactured Landscapes\*](#)