LARRY JOSHUA CROTTS

https://joshuacrotts.us

https://github.com/JoshuaCrotts

SKILLS

Proficient Languages: Java, C, C++, Python, LaTeX

Foundational Languages: Assembly, Prolog, LISP, C#, F#, HTML, CSS, JavaScript

Tools & Software: Windows, Linux, MacOS, IntelliJ, Eclipse, NetBeans, VSCode, Visual Studio, Vim

EDUCATION

Master of Science, Computer Science — GPA: 4.0/4.0
University of North Carolina Greensboro, Greensboro, NC — Aug 2018 - May 2022

Bachelor of Science, Computer Science — GPA: 3.99/4.0
University of North Carolina Greensboro, Greensboro, NC — Aug 2018 - May 2021
Summa Cum Laude, Phi Beta Kappa, Honors Student, Accelerated Degree Program,
STAMPS Scholar (NSF), Provost Student Excellence Awardee,
Chancellor's List Fall 2018 to Spring 2021

Transfer Degree, Computer Science — GPA: 4.0/4.0
Forsyth Technical Community College, Winston-Salem, NC — Aug 2017 - Jul 2018
President's List Fall 2017 to Summer 2018

PROFESSIONAL EXPERIENCE

Graduate Instructor Assistant — Aug 2021 - present
Computer Science Department, University of North Carolina Greensboro
- Will serve as an assistant for a computer science course. Details to come later.

Research Assistant — Jan 2021 - present
Computer Science Department, University of North Carolina Greensboro
- Working with Dr. Nancy L. Green on biology article argument mining with Prolog and inductive logic programming.

Graduate Assistant — Aug 2020 - present
ITS Learning Technology, University of North Carolina Greensboro
- Perform data analysis on the Panopto video-sharing application.
- Assist faculty in the learning, facilitation, and usage of Panopto.

Formal Logic Tutor — Sep 2020 - May 2021
Philosophy Department, University of North Carolina Greensboro
- Tutored for the introduction to formal logic course (PHI 310) at UNC Greensboro, taught by Dr. Insa Lawler.
- Hosted review sessions for exams, recitations for material, created practice problems, and answered questions over email and Zoom.

Undergraduate Research Assistant & Software Developer — Jan 2020 - Sep 2020
Computer Science Department, University of North Carolina Greensboro
- Worked with Dr. Nancy L. Green to build an application that recognizes rhetoric patterns in literature, political arguments, and scientific policy articles to determine an author's persuasion to their readers.
- Emphasized automatic algorithmic detection of rhetorical devices with natural language processing.

Computer Science Tutor & Lab Assistant — Aug 2019 - May 2021
Computer Science Department, University of North Carolina Greensboro
- Aided students in low to mid-level computer science courses with assignments.
- Graded intro to computer science labs and exams.
- Assisted over Zoom, email, and in-person with several courses and projects.

Undergraduate Research Assistant & Software Developer   May 2019 - Aug 2019
Computer Science Department, University of North Carolina Greensboro
- Worked with Dr. Nancy L. Green to rewrite an existing argument [scheme]-structured program into a software engineering ethic-focused diagramming software.
- Argument schemes and articles/cases/ethics using XML files are loaded in by the user, which then allow the user to form premises, hypotheses, conclusions, counterarguments, etc.
- Reconfigured and redesigned the UI accounting for previous usability issues and bugs, including MacOS & Linux support, serialization/deserialization, etc.

Information Technology Tutor   Mar 2018 - Oct 2018
Age-Wiser/TechStar Tutors, Winston-Salem, NC
- Traveled to various locations to meet with clients to address computing problems, diagnose errors,) or to tutor.
- Improved company morale by acting in accordance with respectful and customary ordinances, spreading positive feedback and increasing customer potential.

Computer & Pharmacy Technician   Oct 2016 - May 2018
Walkertown Family Pharmacy, Walkertown, NC
- Quickly and effectively cash register, stocked shelves, counted medicine, answered phone calls.
- Analyzed and troubleshooted computers and technology throughout the pharmacy, including remote desktop support and server management.

RESEARCH

1. Dr. Nancy L. Green and **Joshua Crotts**. "Experimenting with Inductive Logic Programming and Argument Mining," May 2021. University of North Carolina Greensboro (unpublished and incomplete).

2. **Joshua Crotts**, Ali Altamimi, Christopher Brantley, Harinder Badesha, and Nadia Salou-Doudou. "A Visual Improvement to the Pedagogy of Introductory Logic," in *15th Annual Undergraduate Creativity Expo. Bachelor Capstone Project.* Apr 2021. University of North Carolina Greensboro.

3. **Joshua Crotts.** "An Insight into Buffer Overflow Attacks and Kernel Security in Operating Systems," *Operating Systems Graduate Research Paper."* Dec 2020. University of North Carolina Greensboro (unpublished).

4. Dr. Nancy L. Green and **Joshua Crotts**. "Towards Automatic Detection of Antithesis," in *20th Workshop on Computational Models of Natural Argument.* Sep 2020. University of North Carolina Greensboro.

5. Dr. Nancy L. Green and **Joshua Crotts**. "Argument Schemes for AI Ethics Education," in *20th Workshop on Computational Models of Natural Argument.* Sep 2020. University of North Carolina Greensboro.

6. **Joshua Crotts**. "The Optimization of Largely-Populated Emitters in Particle Systems," *Individual Undergraduate Research.* Jun 2020. University of North Carolina Greensboro (unpublished and incomplete).

7. **Joshua Crotts**. "Binary Space Partitioning - A Focus on Rendering and Compression Algorithms," in *21st Annual Undergraduate Honors Symposium. Algorithm Analysis and Design Graduate Research Paper.* May 2020. University of North Carolina Greensboro.

8. **Joshua Crotts** and Dr. Nancy L. Green. "Automatic Detection of Rhetorical Devices in Science Policy Articles," in *14th Annual Undergraduate Creativity Expo.* Apr 2020. University of North Carolina Greensboro.

SERVICE & VOLUNTEERING

1. Undergraduate representative member of the search committee for a new assistant professor position in computer science at the University of North Carolina Greensboro - reviewed over 90 professional curriculum vitae, participated in remote and in-person interviews. Jan 2020.

2. Created a Minecraft code.org tutorial for the remote NSF-funded research study Science Everywhere at the University of North Carolina Greensboro. Apr 2021.

SCHOLARSHIPS & AWARDS

Margaret Ann Cassidy Scholarship in Computer Science ($2,717.00), UNCG	2021-2022
Science, Technology, and Math Prep Scholarship ($4,000.00), UNCG	2020-2021
Margaret Ann Cassidy Scholarship in Computer Science ($4,000.00), UNCG	2020-2021
White Science Research Award ($2,000.00), UNCG	2020-2021
Burgess Honors Scholarship ($100.00), UNCG	2020-2021
Outstanding Student Excellence Award in Computer Science, UNCG	2020-2021
Provost Student Excellence Award, UNCG	2020-2021
Mary D. Murray Scholarship ($1,440.00), UNCG	2019-2020
Samanage Success Computer Science Scholarship ($2,500.00), UNCG	2019-2020
Mary D. Murray Scholarship ($660.00), UNCG	2018-2019
Winston-Salem Foundation Montague Award, Walkertown High School	2017
Salutatorian Medal Award, Walkertown High School	2017