

Sedona Thomas (she/her/hers)

sedona@caa.columbia.edu · (949) 382-5584

<http://www.sedonathomas.com/>

[LinkedIn](#) · [Github](#) · [Up-To-Date Resume](#)

Professional Summary

Passionate and hard-working computer science and human rights student. Experience spans across a wide variety of technical and non-technical field, primarily focusing on privacy, accessibility, fairness, clean object-oriented design, and ethical technologies.

Academic Interests

Privacy, Accessibility, Algorithmic Fairness, Clean Code, Ethical Technologies, Natural Language Processing

Education

Columbia University, Fu Foundation School of Engineering and Applied Science, New York, NY

B.S. in Computer Science (Applications Track) – GPA: 3.7570 ([Diploma](#))

Aug 2018 – May 2022

Columbia University in the City of New York, Columbia College, New York, NY

B.A. in Human Rights (Honors Thesis Track, Women and Gender Studies specialization)

Aug 2018 – May 2023

- Thesis: Mainstream Malware? Rights to Privacy and Non-Discrimination in the Predictive Artificial Intelligence Systems of a Globalized Digital Infrastructure
- Advisors: Professor Andrew J. Nathan and Professor Tracey Holland

Work Experience

Inspirit AI: Main Course Instructor

Jun 2021 – Present

Teach artificial intelligence, machine learning, and natural language processing concepts to high-school students, oversee student programming projects, moderate college and career panels and technology ethics workshops

Inspirit AI: Substitute Instructor

Jun 2021 – Present

Teach course lessons for missing instructors, support main instructors with student engagement, communicate issues to course managers, and provide assistance with miscellaneous tasks throughout the session

Amazon Prime Video: Software Development Engineering Intern

May 2022 – Aug 2022

Collaborate to design cross-disciplinary technologies and bring new products to market

Skills

Computer Science: Natural Language Processing (NLP), Artificial Intelligence (AI), Machine Learning (ML), Databases, Computer Audio, Security, User Interfaces, Programming Languages and Translators, Compilers, Computational Audio, Accessible Technology

Software: Google Cloud Platform (GCP), Web Audio, Figma, Balsamiq, Burp Suite, Ubuntu, Kali Linux, Raspbian, WordPress

Fluent: Python, Java, C, C++, Kotlin, JavaScript, HTML5/CSS, Shell Scripting, SQL, PostgreSQL, Makefile, Git, Bash, Zshell, Flask, LaTeX

Proficient: MIPS Assembly Language, PowerShell, MATLAB, HTTP Protocols

Hardware: Raspberry Pi, Esp32, Arduino, PlatformIO, SolidWorks

Math: Number Theory, Cryptography, Discrete Math, Relational Algebra, Multivariable Calculus, Statistics, Linear Algebra

Languages: English (native proficiency), French (limited working proficiency), Spanish (elementary proficiency)

Volunteering

Computers and Society [Student Volunteer](#)

May 2022 – Present

Volunteer to help research and write the first Computers and Society Wikipedia page with University of Toronto Emeritus Professor Ron Baecker and Uma Kalkar. Main contributions include researching topics, compiling resources, and writing a variety of topics for the Wikipedia page including algorithmic biases, security, data breaches, identity theft, ransomware, deepfakes, fairness, truth, injustice, anthropomorphism, responsibility, accountability, government by algorithm, regulation of algorithms, AI being used prematurely, explainable AI, and computational trust

Columbia Makerspace Volunteer Superuser *Apr 2022 – Present*

Volunteer to help maintain equipment; train and teach students how to use a 3D printer, laser cutter, soldering tools, stained glass tools, hand tools, jewelry making tools, vinyl cutter, and more; hold workshops throughout the semester in the [Columbia Makerspace](#)

All Tech Is Human: [AI & Human Rights Working Group](#) Volunteer *Mar 2022 – Jun 2022*

Volunteer as a contributor to the 2022 AI and Human Rights report. Major contributions include increasing the overall accessibility of the report through the creation of alternative text for profile interviewees and attending working group meetings

Columbia University Volunteer Student Mentor

Society of Women Engineers Mentorship Family Leader *Aug 2020 – May 2022*

Lead and advise five undergraduate women in the computer science mentorship family

QuestBridge Peer Mentor *Aug 2019 – May 2021*

Advised a first-generation and low-income undergraduate, provided assistance accessing Columbia University resources and financial aid

Engineering Student Council Peer Mentor *Aug 2020 – May 2021*

Advised five computer science undergraduates, provided assistance accessing Columbia University resources

Leadership Experience

NSOP R.O.A.R. @ Columbia Facilitator *Mar 2020 – Aug 2021*

Facilitated panels of first-year students, taught about drug and alcohol use and stress culture/resources at Columbia

Columbia Health Peer Ambassador *Aug 2019 – Jan 2020*

Educated Columbia students about available resources on campus, served as a liaison between the student body and Columbia Health

NSOP Responsible Community @ Columbia and Live Well | Learn Well Facilitator *Mar 2019 – Aug 2019*

Led three discussions with twenty first-year students, taught about drug and alcohol use and stress culture/resources at Columbia

Columbia Goju Karate Club Treasurer *Jan 2019 – Jan 2020*

Responsible for semesterly budgets and financial transactions, collect member dues, and hold regular meetings with the Columbia athletics financial advisor

Columbia Goju Karate Club Social Media Manager *Jan 2019 – Jan 2020*

Manage club social media accounts (Instagram and Facebook), increase student engagement with the club, and advertise club events

Awards/Honors

Order of Omega: Greek Honor Society ([Organization](#)) *Apr 2022 – Present*

Out for Undergrad Engineering Alumnus *Aug 2021 – Present*

Out for Undergrad Tech Alumnus *Aug 2021 – Present*

Columbia University SEAS-CC 4-1 Program ([Program](#)) *Aug 2018 – May 2023*

Columbia University Dean's List *May 2021*

Nevada Governor's Volunteer Service Award ([Award](#)) *Apr 2017*

Organizations

Member – All Tech Is Human: AI & Human Rights Working Group ([Organization](#)) *Mar 2022 – Present*

Member – Order of Omega: Omicron Chapter (Greek Honor Society) ([Organization](#)) *Apr 2022 – Present*

Member – Gamma Phi Beta: Iota Chapter ([Gamma Phi Beta Homepage](#)) *Sep 2021 – Present*

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| Member – Columbia Women in Computer Science (WiCS Homepage) | <i>Dec 2019 – Present</i> |
| Member – Columbia Society of Women Engineers (SWE Homepage) | <i>Aug 2018 – Present</i> |
| Member – Columbia iQ (LGBTQ+ STEM Organization) (Facebook Page) | <i>Aug 2018 – Present</i> |
| Member – Columbia QuestBridge Scholars (Facebook Page) | <i>Aug 2018 – Present</i> |
| Member – Columbia Goju Karate Club (Homepage) | <i>Aug 2018 – Jan 2020</i> |

Scholarships/Fellowships

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| <i>The Columbia University Beesen Global Experience Research Fellowship</i> (Fellowship) | <i>2019</i> |
| A \$5,000 fellowship for non-native French speakers to study or do research in Paris during the summer | |
| <i>Macy's 'Vegas Strong' First Responders' Dependent Scholarship</i> (Scholarship) | <i>2018</i> |
| A \$10,000 scholarship awarded over 4 years to students in the wake of the 2017 shooting in Las Vegas | |
| <i>Toyota Making Life Easier Scholarship</i> (Scholarship) | <i>2018</i> |
| A \$10,000 scholarship for undergraduate/graduate students with significant community service contributions | |
| <i>Nevada State Treasurer's Office: Governor Guinn Millennium Scholarship</i> (Scholarship) | <i>2018 – 2024</i> |
| A \$10,000 scholarship for high-achieving students pursuing higher education at a Nevada institution | |
| <i>Michael T. Martin Scholarship</i> (Scholarship) | <i>2018</i> |
| A \$6,000 scholarship for high-achieving students pursuing a 4-year degree in a construction related field | |
| <i>Ronald McDonald House Charities Scholarship</i> (Scholarship) (Article) | <i>2018 – 2020</i> |
| A \$1,000 scholarship to support students pursuing an undergraduate degree | |
| An additional \$1,000 scholarship for outstanding community service for 1 out of 100 scholarship recipients | |
| An additional \$1,500 in scholarships received for continuing academic achievement | |
| <i>American Atheists President's Scholarship</i> (Scholarship) | <i>2018</i> |
| A \$500 scholarship awarded to high-achieving atheist student activists pursuing higher education | |
| <i>Royal Business Bank Scholarship</i> (Scholarship) | <i>2018</i> |
| A \$1,000 scholarship to support high-achieving students pursuing higher education | |
| <i>Overton Power District No. 5 Scholarship</i> (Scholarship) (Article) | <i>2018</i> |
| A \$1,000 scholarship for local students involved in community service pursuing a STEM degree | |
| <i>NV Energy Powerful Partnership Scholarship</i> (Scholarship) | <i>2018</i> |
| A \$1,000 scholarship awarded to a high-achieving students with significant community service contributions | |
| <i>Nevada State Firefighters Association Scholarship</i> (Scholarship) | <i>2018</i> |
| A \$1,000 scholarship for high-achieving students pursuing higher education | |
| <i>Grant M. Bowler Pursuit of Excellence Scholarship</i> (Article) | <i>2018</i> |
| A \$200 local scholarship to high-achieving student with notable academic and extracurricular achievements | |
| <i>Veterans of Foreign Wars Voice of Democracy Local Scholarship</i> (Scholarship) (Article) | <i>2017</i> |
| A \$100 scholarship for outstanding patriotism through an essay writing contest | |
| <i>Prudential Spirit of Community Awards: Distinguished Finalist</i> (Program) (Article) | <i>2018</i> |
| A nationwide program nominating students for outstanding acts of volunteerism in their community | |
| <i>QuestBridge Presidential Scholars Program Nominee</i> (Program) | <i>2018</i> |
| 35 of 5,759 QuestBridge scholars nominated by QuestBridge for the U.S. Presidential Scholars Program | |

Certifications

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| <i>CITI Program:</i> Human Subjects Protection Social and Behavioral Research Certification | <i>Aug 2021 – Present</i> |
| Credential ID: 47837978 (Credential URL) | |
| <i>Columbia University Codepath Cybersecurity Course Honors Certification</i> | <i>Apr 2021</i> |

Projects

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| <i>Digital Synthesizer (with physical device)</i> (Code , Device) (JavaScript, HTML, ESP32) | <i>Sep 2021 – Mar 2022</i> |
| Digital synthesizer with modes for additive synthesis, AM/FM synthesis, and low frequency oscillation with a hand-made hardware control box | |
| <i>Program Compiler Automation Tool</i> (C++, Makefile) | <i>May 2021 – Jun 2021</i> |
| Makefile alternative with cache to maintain current project status, compiles specified programs and creates phony target commands | |

Natural Language Processing Image Captioning (Python)

May 2021 – Jun 2021

A conditioned recursive neural network generator to caption images using a greedy image decoder and beam search, trained on the flickr8k dataset

Web Server ([Code](#)) (C, Makefile, HTML5/CSS)

Aug 2020 – Dec 2020

A web server with a subset of HTTP 1.0 functionality, implementing GET requests for static pages and a database search system

Notable Courses

COMS 3420: Privacy in a Networked World

Spring 2022

Course Description: Focuses on the technical challenges of handling sensitive data, the privacy implications of various technologies, and the policy and legal issues facing data subjects, data owners, and data users

COMS 3162: Developing Accessible User Interfaces

Spring 2022

Course Description: Introduction to access technology and the development of accessible systems. Topics Include: text-to-speech, speech recognition, screen readers, screen magnification, alternative input, tactile displays, and web transformation

COMS 3107: Clean Object-Oriented Design

Fall 2021

Course Description: A course in designing, documenting, coding, and testing robust computer software, according to object-oriented design patterns and clean coding practices.

COMS 4115: Programming Languages and Translators

Fall 2021

Course Description: Discuss principles of design and implementation of compilers, learn about different phases of a compiler including lexical analysis, syntactic and semantic analysis including type checking, code generation, and optimization, and study basic program analysis techniques required to perform compiler optimization

COMS 4705: Natural Language Processing

Summer 2021

Course Description: Computational approaches to natural language generation and understanding. Topics include information extraction, summarization, machine translation, dialogue systems, and emotional speech

COMS 4701: Artificial Intelligence

Spring 2021

Course Description: A broad understanding of the basic techniques for building intelligent computer systems. Topics include state-space problem representations, problem reduction and and-or graphs, game playing and heuristic search, predicate calculus, and resolution theorem proving, AI systems and languages for knowledge representation, machine learning and concept formation

COMS 4111: Introduction to Databases

Spring 2021

Course Description: The fundamentals of database design and application development using databases: entity-relationship modeling, logical design of relational databases, relational data definition and manipulation languages, SQL, XML, query processing, physical database tuning, transaction processing, security