

Patrick Owen Sizemore

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EDUCATION

Duke University <i>Ph.D. in Computer Science</i>	Aug. 2025 – Present Durham, NC
Georgia Institute of Technology <i>M.S. in Computer Science, Interactive Intelligence Specialization</i>	Aug. 2022 – May 2024 Atlanta, GA/Remote
University of North Carolina at Charlotte <i>B.S. in Computer Science with Honors Distinction, Political Science and Spanish Double Minor</i>	Jun. 2020 – Jun. 2022 Charlotte, NC

PROFESSIONAL EXPERIENCE

Android Software Engineer <i>Wealthfront, Inc.</i>	Dec. 2023 – Aug. 2025 Palo Alto, CA/Remote
Android Software Engineer <i>WillowTree, LLC.</i>	Aug. 2022 – Dec. 2023 Durham, NC

• Developed and tested new Android app features in Kotlin for client-facing Investment Products team

• Engaged in on-call duties to monitor app performance, resolving bugs and facilitating crash-free weekly releases

• Planned and implemented quarterly Community of Practice projects to improve Android app infrastructure and development processes

• Collaborated with designers and stakeholders to create modular, responsive home screen Composables for major telecommunications client's mobile app (Dec. 2022 - Dec. 2023)

• Refactored legacy Java code to Kotlin and integrated authentication via social media platforms for national broadcasting client's streaming app (Oct. 2022 - Dec. 2022)

• Resolved state restoration, screen resizing and orientation, and design bugs and improved integration test code coverage for internal company directory app (Aug. 2022 - Oct. 2022)

RESEARCH EXPERIENCE

Investigating the Impact of Online At-Scale Material in Traditional Courses From a Learner Perspective <i>Advisors: Dr. Ana Rusch, Dr. David Joyner</i>

- Collaboration with OMCS program faculty and fellow M.S. students as part of CS8903 Special Problems course
- Conference paper investigating how undergraduate students perceive the quality and value of online learning content used for their in-person course enrollments, submitted to 2024 ACM Learning @ Scale Conference
- Completed semi-structured interviews of undergraduate participants, coding qualitative data and extrapolating key themes for analysis

Developing a Multimodal Conversation Interface for Personalized Foreign Language Learning using LLMs <i>Independent M.S. Project</i>
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- Conducted literature review of applications of large Language Models in improving educational spaces, with a focus on the domain of foreign language education
- Designed “PolyTalk”, a personalized foreign language tutor Web app, using davinci-003 LLM, Flask, JavaScript, and Python
- Led semi-structured interviews of undergraduates, presenting PolyTalk and gathering feedback on user experiences
- Exhibited project as a poster for 2024 Georgia Tech CRIDC competition, winning Office of the Provost’s Award
- Presented findings at 2024 Georgia Tech OMCS Conference with talk “AI-Powered Foreign Language Conversation Practice with LLMs”

Developing a Framework Ethical Content-Based Recommender Systems in Social Media Applications

Advisor: Dr. Nadia Najjar

- Undergraduate thesis as part of requirements for graduation with dual University and Computing & Informatics Honors
- Reviewed literature on recommender systems and principles for analyzing user experience outcomes, focusing on accuracy, transparency, and scrutability
- Developed methodology for qualitatively analyzing recommender systems in Instagram mobile app, using Python to create “bot” accounts and automatically collect data on served recommendations

TEACHING EXPERIENCE

Adjunct Instructor, AI Literacy

Rize Education

Aug. 2024 – Aug. 2025

Durham, NC/Remote

- Taught introductory Artificial Intelligence course for hybrid section of 42 students across 7 colleges and universities
- Analyzed student performance trends and implemented course improvements, delivered academic support in weekly Office Hours sessions, and graded all course deliverables

Instructional Associate and Graduate Teaching Assistant

Georgia Institute of Technology

Aug. 2023 – Present

Atlanta, GA/Remote

- Provide weekly feedback on course deliverables for 40 students of graduate-level Global Entrepreneurship course
- Collaborate with Teaching Assistants and course professor to update assignments and grading policies and communicate with students via asynchronous discussion boards

RELEVANT COURSE PROJECTS

Raven's Progressive Matrices Agent | *Python, opencv, numpy, Pillow*

Apr. 2023

- Python agent leveraging AI techniques to process matrix images and transformations for visual analogy tests
- Achieved 76% accuracy rate on problem set, matching average scores of human test takers

EnviroView | *React, Firebase, Google Data Studio, JavaScript, Bulma*

Oct. 2021

- React Web application to promote awareness of national climate change data through data visualizations
- Awarded 2nd place prize in “Energy and Environment” category, HackDuke 2021

Genetics Buddy | *Java, Firebase, Android Studio*

Sep. 2021

- Android mobile application to display and analyze large amounts of genetic data for use in research labs
- Awarded “Best Use of Google Cloud” prize, MLH Peace Out Hacks

SKILLS

Programming Languages: Kotlin, Python, Java, Scala, JavaScript, TypeScript, MySQL, GraphQL, HTML/CSS

Software and Systems: Firebase, Amazon Web Services, Postman, Jenkins, Git/GitHub/GitLab, Unix/Linux, Sentry, Google Data Studio