Veronica Pimenova

PhD in Computer & Information Science

pimenova@umich.edu Ann Arbor, MI
LinkedIn GitHub **X** X(Twitter)

Education

University of Michigan (UM), Ann Arbor, MI **August 2025 - May 2030**
Doctorate Degree in Information Science
Advised by: Venkatesh Potluri, Dhruv "DJ" Jain GPA: 3.8

Carnegie Mellon University (CMU), Pittsburgh, PA **August 2022 - May 2025**
Bachelor of Science in Information Systems
Advised by Andrew Begel, GPA: 3.8
Dean's List (High Honors)

Relevant Courses (UM): Qualitative Analysis, Quantitative Analysis (R)

Relevant Courses (CMU): Imperative Computation, Calculus I & II, Reasoning with Data, Designing Human Centered Software, Database Design & Development, Interactive Design, Application Design & Development, Software Engineering, IOS Mobile App Development, Language Diversity & Culture

Research Experience

Doctoral Researcher, University of Michigan **August 2025 - Present**
Advisors: Venkatesh Potluri, Dhruv (DJ) Jain, Steve Oney, Westley Wimer. Human factors of software engineering with a focus on accessibility & developer productivity. Conducted 10+ interviews with developers on their usage of co-presence practices in software engineering and created a framework on how AI can be used for collaboration in workplace settings.

Research Collaborator, Microsoft Research **May 2025 – Present**
Advisors: Madeline Endres, Sarah Fakhoury, Chris Bird, Margaret Storey. Conducting qualitative research to explore "vibe coding," an emerging cultural practice in developer communities and its relation to developer burnout. Helping with study design, prescreening, and participant interviews to examine where and how vibe coding occurs, developers' motivations, and the sociotechnical challenges involved.

Research Assistant, Carnegie Mellon Software & Societal Systems **May 2025 – August 2025**
Advisor: Andrew Begel. Collaborating on GRACE, a project that develops tools to support blind and low-vision (BLV) users in screen-based collaboration. Designing and evaluating a system that captures gaze and gesture data to infer screen elements referenced during conversations. The system translates non-verbal visual cues (e.g., pointing, gaze) into accessible descriptions to enhance shared attention and communication equity.

Research Assistant, Carnegie Mellon Heinz College of Information Systems **May 2025 – June 2025**
Advisors: Uttara Ananthakrishnan, Michael Smith. Worked on data analysis via SQL and Big Query for a large collected datset of piracy streaming data. Scraped the data from inbound/outbound URL's to order the data by week, show title, episode number, and number of unique users.

Principal Investigator, Carnegie Mellon Software & Societal Systems **Sept 2022 – May 2025**
Advisor: Andrew Begel. Managing a study with 20+ participants, conducting recruitment, user studies, and statistical analysis. Designing and testing an online accessible learning platform for neurodiverse learners, focusing on ADHD and autism. Applying ML models for segment detection in Scratch-based pedagogical videos.

Research Assistant, Carnegie Mellon Robotics Institute **May 2024 – Oct 2024**
Advisor: Andrew Hundt. Conducted research on Autism Spectrum Disorders, focusing on literature reviews and Python-based analysis. Collaborated with interdisciplinary teams to refine research methodologies and improve data analysis. Developed tools in Python to assist in the processing and visualization of research findings.

Student Researcher, Carnegie Mellon Decision Sciences **Sept 2023 – Dec 2023**
Advisor: Erin Carbone. Led a team of 6 to study the correlation between grade fairness and student quality of life. Conducted bi-weekly meetings, literature review, and created a poster presented to 100+ students.

Selected Publications

Pimenova, V., Fakhoury, S., Bird, C., Storey, M., Endres, M. *Good Vibrations? A Qualitative Study of Co-Creation, Communication, Flow, and Trust in Vibe Coding.* ACM Transactions on Software Engineering and Methodology 2026.

Pimenova, V., Lee, C., Bhakdibhumi, B., Chu, S., Begel, A. *Enhancing Learning Platforms for Individuals with ADHD.* ACM SIGACCESS Conference on Computers and Accessibility (ASSETS) 2026.

Zhang, X., Subramonyam, H., Sarkar, A., Drosos, I., Wang, J., Lee, K., **Pimenova, V.**, Chen, X., Lukoff, K. *Generative Design and Vibe Coding: Rethinking The Design-Development Divide for UI Prototyping.* ACM Conference on Human Factors in Computing Systems (CHI) 2026.

Pimenova, V., Sechayk, Y., Murai, F., Hundt, A., Dori-Hacohen, S. *A Longitudinal Autoethnography of Email Access for a Professional with Chronic Illness and ADHD: Preliminary Insights.* ACM SIGACCESS Conference on Computers and Accessibility (ASSETS) 2025.

Conference Presentations

Pimenova, V., Sechayk, Y., Murai, F., Hundt, A., Dori-Hacohen, S (2025). "A Longitudinal Autoethnography of Email Access for a Professional with Chronic Illness and ADHD: Preliminary Insights." Presented at ACM SIGACCESS Conference on Computers and Accessibility (ASSETS).

Pimenova, V. (2025). "Enhancing Learning Platforms for Individuals with ADHD in XR Education" Presented at XR Access Symposium.

Pimenova, V. (2025). "Enhancing Learning Platforms for Individuals with ADHD." Presented at ACM Special Interest Group on Computer Science Education (SIGCSE).

Pimenova, V., & Begel, A. (2025). "Enhancing Learning Platforms for Individuals with ADHD." Presented at Carnegie Mellon University Meeting of the Minds (MoM).

Pimenova, V., Bhakdibhumi, A., & Begel, A. (2023, 2024). "Neuroinclusive Documentation." Presented at Carnegie Mellon University Meeting of the Minds (MoM).

Pimenova, V., Ranaweera, L., & Walker, D. (2022). "Computer Vision in Analysis of Sports Motion." Presented at the Pittsburgh Regional Science & Engineering Fair (PRSEF).

Pimenova, V., & Griest, P. (2020). "Synthesis of Spiky Nanoparticles for Safer Paints" Presented at PRSEF.

Pimenova, V., & Griest, P. (2019). "Optimized Fluorescent Paint Design with Six Sigma." Presented at PRSEF.

Invited Talks

Pimenova, V. (2025, May). Guest lecture at CMU Global Accessibility Awareness Day (GAAD) [Oral presentation]. GAAD, Carnegie Mellon University.

Pimenova, V. (2024, December). Guest lecture at CMU Accessibility Lunch Seminar Speaker Series [Oral presentation]. Access at CMU, Carnegie Mellon University.

Pimenova, V. (2024, October). Workshop presentation in collaboration with CyLab [Workshop presentation]. OurCS, Carnegie Mellon University.

Pimenova, V. (2024, September). Guest lecture on accessibility research to 200+ attendees during CMU's Family Weekend [Oral presentation]. Carnegie Mellon University.

Pimenova, V. (2024, September). Guest lecture on accessibility in software design [Oral presentation]. Carnegie Mellon University, 67-200 Course.

Pimenova, V. (2023, October). Panelist for software internships talk [Panel discussion]. Carnegie Mellon University.

Professional Experience

Associate Product Manager Intern, Pegasystems **January 2025 - May 2025**
Location: Remote
Collaborating with the Customer Decision Hub team to design and prioritize product features that enhance customer engagement and decision-making processes.

Software Engineering Intern, Forevergreen **May 2024 - Aug 2024**
Location: Pittsburgh, PA
Developed Python backend services for a carbon calculator application, optimizing data storage by 30%. Implemented REST APIs and integrated interactive front-end components designed in TypeScript from Figma mockups.

Machine Learning Intern, Velo AI **May 2023 - Aug 2023**
Location: Pittsburgh, PA
Processed large-scale video datasets for social media campaigns, more than doubling product visibility. Designed and implemented ML models for object detection and animation overlays. Conducted field research and demo testing in the Pittsburgh area to refine algorithms and validate features.

Software Engineering Intern, Argo AI **May 2022 - Aug 2022**
Location: Pittsburgh, PA
Developed and trained a lane-blocking classifier using random forests on real-world video data. Improved Python scripts for data pre-processing, increasing data filtering efficiency. Worked with the perception team to deploy models in a production environment.

Fellowships and Grants

$100,000 National Science Foundation Graduate Research Fellowship
Recognized by the National Science Foundation for promising research in AI for developer productivity and well-being.

$100,000 Rackham Merit Fellowship
Issued by the University of Michigan Rackham Graduate School, awarded for outstanding academic and

research performance.

$20,000 MSA Deike-Ryan Scholarship Program
Issued by Mine Safety Appliances (MSA) Inc., awarded for outstanding academic performance, leadership, and volunteer work.

$10,000 Raytheon Technologies Underrepresented Minorities Award
Issued by International Information System Security Certification Consortium (ISC^2), recognizing achievements in accessibility research, academic performance, and volunteer work in promoting underrepresented minorities in tech.

$5,000 ISC^2 Undergraduate Scholarship
Awarded by International Information System Security Certification Consortium for excellence in accessibility research, academic performance, and leadership in promoting underrepresented minorities in tech.

$4,500 Boeing Leadership Award for Information Systems
Issued by The Boeing Company for exemplary leadership and academic performance in the CMU Information Systems program.

$4,500 Undergraduate Research Fellowship
Awarded by Carnegie Mellon University, Office of Undergraduate Research and Scholar Development, for conducting advanced research projects in accessibility.

$4,000 Octillo Women's Cybersecurity Award
Recognized by International Information System Security Certification Consortium (ISC^2) for contributions to the field of information, promoting diversity, and accessibility research.

$2,500 Cranberry Cup Scholarship
Issued by Cranberry Cup Organization, supporting academic achievements and community service.

$2,000 Bess Family Funding Recipient
Awarded by Bess Family Fund for the development of machine learning models for autonomous software.

$1,500 UMSI Travel Fellowship
Issued by the University of Michigan School of Information.

$1,000 Tapia Conference Scholarship
Sponsored by Carnegie Mellon Information Systems Inclusion Committee to attend the 2024 Tapia Conference.

$1,000 XR Access Symposium Scholarship
Provided by Cornell University and Meta Reality Labs for participation in discussions on accessibility in Augmented and Virtual reality (AR, VR) for the 2024 and 2025 XR Access Symposium.

$900 Rackham Travel Fellowship
Issued by the University of Michigan Rackham Graduate School.

$250 Carnegie Mellon Travel Grant
Provided by Carnegie Mellon University Undergraduate Research for presenting at the 2025 NCUR conference.

Awards & Honors

Microsoft Research New Future of Work Report Feature
Recognized by Microsoft Research for promising research in AI-assisted software engineering practices (development of a ”theory of vibe coding”, page 64, MSR New Future of Work Report, 2025).

NSF Graduate Research Fellowship Program (GRFP) Honorable Mention
Recognized by the National Science Foundation for promising research in accessible computing for autistic software engineers.

Judith Resnik Award Honorable Mention
Issued by Carnegie Mellon University for promoting women in computing research.

Women and Information Technology Affiliate Award (3x)
Issued by the National Center for Women and Information Technology (NCWIT) for promoting diversity in computing.

3rd Place in Computer Science, PRSEF
Awarded at the Pittsburgh Regional Science & Engineering Fair, Spring 2022, for a distinguished project in computer science which removes bias in US figure skating scoring systems.

PRSEF Corporate Sponsorship Awards (2x)
Received at the Pittsburgh Regional Science & Engineering Fair for innovative computer science projects.

Teaching Experience

Head Teaching Assistant, Carnegie Mellon University **January 2025 - May 2025**
Course: Information Systems Milieux (67-250), Dietrich College Information Systems
Supervised by Dr. Jeria L. Quesenberry. Responsible for leading recitations and coordinating curriculum planning for a class of 100+ students. Tasked with mentoring other teaching assistants to ensure consistent and high-quality instruction.

Teaching Assistant, Carnegie Mellon University **January 2024 - May 2024**
Course: Information Systems Milieux (67-250), Dietrich College Information Systems
Supervised by Dr. Jeria L. Quesenberry. Conducted recitations and provided individual support to students in a class of 100+. Assisted in grading assignments, exams, and projects, ensuring fair and accurate assessment. Organized review sessions to reinforce core concepts and address student questions.

Teaching Assistant, Carnegie Mellon University **May 2024 - August 2024**
Course: Undergraduate Research (99-370), Summer Undergraduate Research Apprenticeship (SURA)
Supervised by Dr. Richelle Bernazzoli. Supported students in formulating research questions, identifying appropriate research methodologies, and developing skills to write research proposals. Facilitated weekly check-ins to track progress and address challenges, ensuring successful completion of individual research projects.

Conference Reviewer

ACM Conference on Human Factors in Computing Systems (CHI), 2025

Conferences Attended

ACM SIGCHI 2026, Barcelona, ES **April 2026**
Co-hosted a meetup, served as a Student Volunteer (SV) on the Accessibility team.

ACM SIGASSETS 2025, Denver, CO **October 2025**
Presented a poster.

XR Access Symposium 2025, New York, NY **June 2025**
Presented during a two-day poster session.

ACM SIGCSE 2025, Pittsburgh, PA **February 2025**
Served as a Student Volunteer (SV) and presented at the Access Computing day.

ACM SIGASSETS 2024, Virtual **October 2024**
Served as a virtual Student Volunteer (SV) at the ACM Special Interest Group on Accessible Computing (SIGACCESS) Conference. Assisted with organizing sessions and supporting accessibility initiatives by making sure video submissions followed accessibility guidelines.

UIST 2024 Conference, Pittsburgh, PA **October 2024**
Attended the ACM Symposium on User Interface Software and Technology as a sponsored participant for MIT Media Lab's workshop on soft wearables. Engaged in discussions on emerging trends in HCI and wearable technology, with a focus on accessibility.

Tapia Conference 2024, San Diego, CA **September 2024**
Participated in the Richard Tapia Celebration of Diversity in Computing, engaging with talks on diversity, inclusion, and accessibility in computing. Presented research to attendees and networked with professionals and academics.

XR Access Symposium 2024, New York, NY **June 2024**
Attended the XR Access Symposium, focusing on enhancing accessibility in virtual and augmented reality. Participated in workshops and discussions on inclusive design for immersive technologies. Presented to hundreds of in-person and remote attendees.

Volunteer Experience

Member, AccessComputing, University of Washington **September 2024 – Present**
Collaborating with a nationwide network to promote accessibility in computing education and research. Participating in workshops, discussions, and initiatives aimed at improving inclusion and accessibility for individuals with disabilities in computing fields.

Head Scorekeeper (Senior Division), Academic Games League of America (AGLOA) **April 2026**
Served as head scorekeeper for senior division for the 2026 AGLOA national tournament in Charlotte, NC. Judged for Propaganda, Presidents, and History (Theme) competition games by resolving student scoring disagreements.

Judge, Pittsburgh Science and Engineering Fair (PRSEF) **March 2025**
Evaluated high school computer science projects at PRSEF, drawing on technical expertise and research experience to provide constructive feedback to young innovators.

Notetaker, XR Access **June 2024**
Documented key discussions and presentations focused on improving accessibility in virtual and augmented reality technologies.

Administrative Assistant, Academic Games League of America (AGLOA) **April 2024**

Assisted in organizing national academic competitions, managing event logistics, and providing operational support for attendees and staff.

Lead Mentor, Women in Information Systems, Carnegie Mellon University **Aug 2023 – May 2024**
Organized mentorship opportunities for female students in technology, leading workshops on career development, networking, and technical skill-building.

DEI Chair, Delta Delta Delta Sorority, Carnegie Mellon University **Aug 2023 – Dec 2023**
Advocated for inclusivity by implementing Diversity, Equity, and Inclusion (DEI) strategies for 70+ members, coordinating events and fostering a supportive community.

UI/UX Team Member, CMU Scotty Labs **Sept 2022 – May 2023**
Participated in design workshops and contributed to hackathon projects, including Tartanhacks, focusing on innovative user interface designs.

Java & Python Instructor, Steel City Codes, Pittsburgh, PA **June 2021 – Aug 2021**
Taught Java programming through game design to middle and high school students from underrepresented backgrounds, fostering interest in technology.

Lead Performer, Ronald McDonald House Charities **June 2021 – Aug 2021**
Performed figure skating musical and artistic showcases at fundraising and community events to support the organization's mission of providing housing for families in need.

Students Mentored

Shalini Madan, University of Michigan, Fall 2025 - Winter 2026
Baramee (Bing) Bhakdibhumi, Carnegie Mellon University, Spring 2023 - Fall 2024
Parishi Jain, Carnegie Mellon University, Summer 2025
Chris Lee, Carnegie Mellon University, Spring 2023 - Summer 2024
Jiayang (Jasmine) Shi, Carnegie Mellon University, Summer 2025
Octavius Tan, Carnegie Mellon University, Spring 2023 - Fall 2023
Emily Yu, Carnegie Mellon University, Fall 2024 - Spring 2025