Vishnupriya Napa Ravikumar
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Ph.D. Student at the University of Washington, Seattle

ABOUT

Interdisciplinary researcher specializing in AI-driven decision-making, governance, and socio-technical systems. My work bridges human-centered design, urban informatics, and machine learning (ML) to examine how AI shapes governance, economic competition, and labor structures. I began applying ML in urban informatics, using predictive modeling for participatory decision-making in urban planning. This evolved into research on AI's role in business strategy and corporate governance. Currently, I am developing an interactive Decision-Making AI Bot, a tangible AI system that reimagines strategic planning and economic decision-making. My work critically engages with algorithmic transparency, participatory AI governance, and ethical adaptability, ensuring AI enhances—rather than replaces—human reasoning. With experience in software models, predictive systems, and participatory planning tools, I take an interdisciplinary, theory-driven yet application-focused approach to AI governance, promoting ethical decision-making, worker empowerment, and long-term resilience in business and policy.

EDUCATION

University of Washington, Seattle, Sep 2024 - June 2027
Ph.D. Human Centered Design and Engineering
Human Centered AI and Data Science, Science Technology and Society Research

University of Michigan, Ann Arbor, Graduation Dec 2023
Master of Urban and Regional Planning, Graduate Certificate in Urban Informatics
Urban Design Focus
Entrepreneurship Leadership Program
Entrepreneurship Focus
Rackham Professional Development DEI Certificate
ArtsEngine AiiR grant, MicroGrant for my independent project

MEASI Academy of Architecture, Anna University, India, May 2018
Bachelor of Architecture
Thesis: 'A Contemporary Library for Research and Contemplation', explored how democracy, equity, diversity, and inclusivity translate into lived experiences in design of public spaces.
Top 50 in the Tamayouz International Graduation Projects Award 2018 with the selection criteria - "Aspirational and Transformative projects tackling local and global challenges, informed by a holistic understanding of context"

College of Environmental Design, University of California, Berkeley, Jul - Aug 2019
InArchADV
Refined design techniques that extract architectural concepts from creative processes utilizing a diverse range of visual art media, as part of an intensive month-long Summer Program

CEPT University, Ahmedabad, India, Dec 2015
Summer Fellow
Understanding Urban Life and Design of Contemporary Public Spaces
Refining Concepts for Architectural Design

AWARDS

University of Washington, Seattle, USA
***Ph.D. in Human Centered Design and Engineering**, Sep 2024 onwards*
- Herbold Data Science Fellowship Recipient for the Academic Year 2024-2025
- Selected for the Science, Technology, and Society Studies Certificate Program

University of Michigan, Ann Arbor, USA
***Alumni Relations Officer**, Rackham Student Government Executive Board, Aug 2022 - Dec 2022*
***Entrepreneurship Leadership Program Fellow**, Jan 2023 - May 2023*
- Selected as 1 in 20 Entrepreneurs across the University to be trained to become Leaders and C-suite change makers
- Customer Discovery, Competitor Analysis, Market Research for startups
- ELP Trek to Washington D.C. to collaborate and brainstorm with startups

EXPERIENCE

University of Washington, Seattle, USA
***Ph.D. in Human Centered Design and Engineering**, Sep 2024 onwards*
Human-Centered Entrepreneurship
- Researching AI-driven decision-making in business strategy and governance, focusing on how AI mediates power, competition, and labor structures in entrepreneurial ecosystems. Developing an interactive Decision-Making AI Bot that integrates participatory AI governance, algorithmic transparency, and strategic planning to explore how AI can enhance rather than replace human reasoning in high-stakes business and economic decision-making.

***Washington 2050 Integrated Sustainable Transportation System**, Aug 2024 onwards*
- Developing Data Visualizations with D3, Tableau, Python, and other tools, to create dashboards for Political and other stakeholders to make effective decisions on Washington's Future of Transportation for the year 2050 using historical and forecasted data and trends

***Research Scientist for Traffigram (startup)** - "Travel in minutes not miles," Mar 2024 onwards*
- Developing Usability Research for Traffigram which maps travel times based on isochronal distortions under Advisor Cecilia Aragon

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University of Michigan, Ann Arbor, USA

***Urban Informatics Graduate Certificate**, Aug 2021 - Aug 2023*

- Applying ML principles to public data for optimizing transportation routes and resource allocation in urban planning.
- Developing predictive models to help cities anticipate trends in infrastructure and transportation based on community sentiment.
- Interpreting large-scale datasets to provide actionable insights for participatory urban planning and decision-making.
- Building software models and tools to analyze public sentiment and predict urban growth, fostering data-driven solutions in city management.
- Focusing on ML research in software, creating models that integrate human-centered design with data-driven, intelligent systems to improve urban experiences.

***Participatory Design in Clean Energy Systems, Research Assistant**, Aug 2022 - Aug 2023*

- Researched incorporation of participatory processes in design of energy technologies in collaboration with communities to center principles of equity and environmental justice
- Exercised business acumen, customer discovery, market research, ecosystem mapping skills to comprehensively interview industry experts to document current state of community engagement in design of clean energy technology

***Information and Data Specialist, Brademas Fellow**, Aug 2022*

- Interned with Global Detroit (GD); support in the activation of a relational database to study effect, storymapping impact; support in developing scope and design of on-demand datasets to create custom reports on international and immigrant talent for US regions; co-designed a data dashboard about immigrants in Detroit

***Global Information Engagement Program Fellow**; **Community Engagement Intern**, May 2022 - Jul 2022*

- Interned with City of Ann Arbor: Designed a digital Engagement Hub for the City of Ann Arbor
- Conducted customer discovery, user studies, UI/UX research and design for an accessible website for the City's community engagement efforts

***Independent Research**: **AiiR Grant, MicroGrant** (ArtsEngine), Aug 2021 - Jan 2023*

- Contextualized learnings in urban complex systems to address community needs to develop innovative prototypical technology solutions to urban problems
- Visioned, designed, and built apps using Python and No-Code App Building platforms using creative white-boarding to break down complex problems into logic-models for building prototype software applications

City of Ann Arbor, Michigan, USA

***Systems Planning and Community Engagement Intern**, May 2022 - Jul 2022 & Jan 2023 - May 2023*

- Exercised systems thinking to design, prototype, plan for the City's Engagement Initiatives across the City's planning departments for effective community engagement in Ann Arbor to promote DEI principles
- Conducted community needs assessments by data collection and data analysis of surveys, interviews, and interactions with the Equitable Engagement Steering Committee representing minority groups in the city
- Data Analysis and Reporting: Analyzed and synthesized geographic and socioeconomic data for urban planning projects, resulting in a 30% increase in data accuracy and efficiency in project planning. Developed comprehensive reports on urban development trends, influencing key policy decisions and contributing to a 25% improvement in community planning outcomes
- Community Engagement and Public Information: Facilitated over 4 community engagement sessions, reaching 100+ residents, to gather input for urban development plans, enhancing community involvement by 50%. Delivered clear and concise information on city planning policies to diverse audiences, achieving a 35% increase in public understanding and support for urban development initiatives
- Project Coordination: Coordinated the review of 100+ user feedback on the online engagement hub, ensuring 95% translation of views into design review and feedback processes. Utilized professional judgment to evaluate user feedback, leading to a 20% increase in the efficiency of the feedback and design review process
- Interdepartmental Collaboration: Collaborated with other department members on problem-solving and task completion, leading to a 25% improvement in interdepartmental project coordination. Represented the department in interdepartmental service teams, contributing to a 20% increase in cross-functional project success rates. Assisted in coordinating with different departments in the City to understand their community engagement needs including the Comprehensive Planning Department and process, achieving a 98% success rate in ensuring their feedback was documented
- Stakeholder Negotiation and Consensus Building: Successfully negotiated solutions and facilitated consensus on planning issues with applicants and interest groups, resulting in a 30% decrease in project disputes. Played a key role in resolving complex planning challenges, leading to a 40% improvement in stakeholder satisfaction

Chennai Resilience Centre (CRC), Chennai, India

A unit of Care Earth Trust (CET), supported by the Adrienne Arsht – Rockefeller Foundation Resilience Centre and the Resilient Cities Network

***Program Facilitator**, Aug 2020 - Jul 2021*

- Researched for the Urban Oceans project: Marine litter, Microplastics, and the impact of Plastics in oceans; Waste Management Systems for transition to a circular economy for plastic; Extreme Heat project and Challenge; Chennai Urban Horticulture Initiative (CUHI); Water as Leverage (WaL) Initiative to propose a nature-based in-situ waste water treatment system for a Children's Convent in Chennai; CRC's COVID Relief and Resilience Building Programs and documented through reports