Niklas van der Wagt

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EDUCATION

University of California, Berkeley   Berkeley, CA
- Ph.D., Sociology and Demography (Expected)   *June 2030*
- M.A., Demography (Expected)   *June 2025*

University of California, Los Angeles   Los Angeles, CA
- B.A., Physics, Sociology   *June 2023*

RESEARCH EXPERIENCE

Biodynamics Lab at UCSD   La Jolla, CA
Research Assistant   *August 2023 - Present*
- Modify and use a 2D agent-based model of bacterial colonies using C++
- Model features such as cell collisions, friction, splitting, lysis, and quorum sensing
- Study patterning and dynamics of model colony using MATLAB

Effective Altruism at UCLA   Los Angeles, CA
Researcher   *October 2022 - June 2023*
- Conducted philosophical research on population ethics and ethics of procreation
- Produced a research paper with guidance from UCLA philosophy faculty

Michael Fitzgerald Research Group   Los Angeles, CA
Astrophysics Research Assistant   *January - June 2021*
- Performed various data analysis techniques to clean up data from the integral field dual-channel polarimetry mode of the Gemini Planet Imager using Python

Elegant Mind Club   Los Angeles, CA
Biophysics Research Assistant   *June - August 2020*
- Programmed an Arduino using C to control an LED light strip
- Conducted experiments on overt/covert attention with random visual and auditory stimuli

PUBLICATIONS
- Steppe, Paige, Camilo Rey-Bedón, Shalni Kumar, Emerald Forrest, **Niklas van der Wagt**, Arnav Tayal, Lev Tsimring, and Jeff Hasty. 2024. "Phenotypic Patterning through Copy Number Adaptation to Environmental Gradients." *ACS Synthetic Biology* 13(3): 728–735. <u>https://doi.org/10.1021/acssynbio.3c00617</u>.

TEACHING EXPERIENCE

Primok School   Cañar, Ecuador
English Teacher   *June - August 2022*
- Designed English curriculum and taught elementary English lessons

Calteach at UCLA   Los Angeles, CA
Intern   *January - March 2020*
- Assisted a fourth grade class with science lessons and experiments
- Planned and taught an interactive lesson on Earth's atmosphere with another intern

Mathnasium   Carlsbad, CA
Instructor   *September 2017 - June 2019*
- Tutored students from first to twelfth grade in mathematics

PROFESSIONAL EXPERIENCE

Carbon Neutrality Initiative at UCLA   Los Angeles, CA
CNI Fellow   *January - September 2020*
- Analyzed carbon footprint and sustainability of UCLA facilities
- Revamped portions of the UCLA Sustainability website

Teradyne   Agoura Hills, CA
Electrical Engineering Intern   *July - August 2019*
- Worked with multiple languages (Python, Java, UR Script) to program a Universal Robots robotic arm to automate chip serialization
- Used Solidworks and g-code to 3-D print robotic arm attachments

ACADEMIC AND PROFESSIONAL ORGANIZATIONS

Population Association of America (PAA)   Alexandria, VA
Member   *2025-Present*

UCLA Undergraduate Philosophy Club   Los Angeles, CA
Vice President   *October 2021 - June 2023*
- Researched and presented various philosophical materials each quarter
- Managed the social media presence of the club

HONORS AND AWARDS

Cum Laude, UCLA   *2023*
Teradyne Scholarship   *2019, 2020, 2022*

SKILLS
- Technical: R, Python, C/C++, Java, MATLAB, Wolfram Mathematica, LaTeX
- Languages: English (fluent), Spanish (proficient), German (proficient)