

# Deniz Nazar (Nazarova)

PhD Student, University of Washington

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## About

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First Central Asian woman to pursue a PhD in Computer Science & Engineering in the U.S., with a research focus on AI Safety & Reliability, LLM Agents, Human-Centered NLP, and Proactive Learning.

## Education

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### University of Washington

Sept 2024–present

PhD in Computer Science

GPA: 3.84/4.0.

*Advisors: Yulia Tsvetkov, Tim Althoff*

Current project: LLM risk assessment framework in mental health conversations under uncertainty

Courses: Machine Learning, Natural Language Processing, Security & Privacy, Data Visualization, AI Agents

### American University of Central Asia

2018–2023

Bachelor's Degrees in Software Engineering and Psychology

GPA: 3.91/4.0.

*Advisors: Almaz Bakenov (SE), Elena Kosterina (PSY), Gulnara Kurmanova (PSY)*

*Google Research Mentors: Dimitri Kanevsky, Artem Dementyev, Milagros Escredo*

Thesis (SE): Application of Artificial Intelligence in Mental Healthcare: GPT-3 and Cognitive Distortions.

Thesis (PSY): Engineering and Estimating Efficiency of the AI Chatbot in Reducing Cognitive Distortions.

## Work Experience

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### Data Engineer

May–Oct 2024

*UN Women, Europe and Central Asia*

Built a pipeline to scrape and process data from state and news websites on femicide cases. Designed, maintained, and documented a database of femicide cases for open-source usage.

### Data Engineer

Jan–Jul 2024

*EPAM Systems*

Developed and tested Kafka producers and consumers to handle high-volume data pipelines. Implemented data transformations and aggregations using Spark SQL and DataFrames API. Utilized Azure Blob Storage and Azure SQL Database for efficient and scalable data management.

### Lead Machine Learning Engineer

Nov 2019–Apr 2021

*EIWA, company reached the top-5 result at the Glovo KG Startup Competition (250+ applied)*

Post-trained an LLM agent that guides women on medical prescriptions during pregnancy. Applied knowledge graphs to guide decisions on postpartum mental health support.

### Lead Machine Learning Engineer

Jan 2018–Oct 2019

*USAID WSpark Women in Tech*

Implemented AI-driven features, tailoring machine learning algorithms to the Kyrgyz language. Contributed data in Kyrgyz to the open-access projects focused on NLP in Kyrgyz language. Developed, maintained, and optimized server-side applications.

### Summer ML Intern

2021, 2024

*Neuromatch*

(2024) Designed experiments to measure the performance of Hebbian and SoftHebbian learning as biologically plausible alternatives to backpropagation using the MNIST dataset.

(2021) Trained a neural network that recognized with 93% accuracy whether a patient took a language or math test based on fMRI scans (Best Internship Award, AUCA).

## Selected Honors & Awards

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(2025) Wissner-Slivka Endowed Fellowship

(2024) **First-Year Ph.D. Fellowship**, Paul G. Allen School of Computer Science and Engineering

(2024) Advanced Data Communications Fellowship, ForSet  
(2023) **Best Thesis Award**, American University of Central Asia  
(2023) Outstanding Contribution Award, AUCA Writing and Academic Resource Center  
(2023) Best Research Internship, Annual Student Symposium  
(2022) CCE Capstone Grant, AUCA Center for Civic Engagement  
(2019-2023) Dean's Lists, President's Lists, Highest GPA at the Department  
(2018) **Golden Certificate Scholarship, President of the Kyrgyz Republic** – covers tuition for a bachelor's degree at any university in the Kyrgyz Republic. This scholarship is awarded to individuals who achieve the top 50 results in the nationwide university entrance test, with the recipient ranking 3rd.  
(2016) "Abai Kunanbayev" Scholarship, Nazarbayev University International Cooperation Office – awarded for ranking 1st among international applicants.

## Publications

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**Nazarova, D.** (2023). Application of Artificial Intelligence in Mental Healthcare: Generative Pre-trained Transformer 3 (GPT-3) and Cognitive Distortions. In: Arai, K. (eds) *Proceedings of the Future Technologies Conference (FTC) 2023, Volume 1* (FTC 2023, Lecture Notes in Networks and Systems, vol. 813). Springer, Cham. [https://doi.org/10.1007/978-3-031-47454-5\\_16](https://doi.org/10.1007/978-3-031-47454-5_16)

**Nazarova, D.**, et al. (2025). *Femicide in Uzbekistan*. Conducted as part of a joint initiative of UN Women. [https://eca.unwomen.org/sites/default/files/2025-10/Femicide\\_dataset\\_Uzbekistan.xlsx](https://eca.unwomen.org/sites/default/files/2025-10/Femicide_dataset_Uzbekistan.xlsx)

**Nazarova, D.** (2024, December 5). A real man never asks for help: Exploring why men in Kyrgyzstan are four times more likely to die by suicide. *CABAR.asia*. Conducted as part of the ForSet Advanced Data Communications Fellowship. [cabar.asia](http://cabar.asia)

Djordjevic, J., Gagoshashvili, M., Andrew, P., Veloso, V., Palaniswamy, P., Leung, J. P., Nikolic, T., **Nazarova, D.**, ..., Atay, H. (2022). A Look into Frida's Participatory Grantmaking Model. In *Resourcing Connections: Reflections on Feminist Participatory Grantmaking Practice*. FRIDA. [youngfeministfund.org](http://youngfeministfund.org)

Molchanova, E., Galako, T., Bruce, S., Fountoualkis, K., Smirnova, D., Panteleeva, L., Kosterina, E., Childebaeva, A., Radchenko, V., **Nazarova, D.**, & Kim, E. (2022, August 3–6). Estimating the Effects of COVID-19 Outbreak on Mental Health (COMET): The Case of the Kyrgyz Republic [Conference presentation abstract]. *Twenty-second Annual WPA (World Psychiatric Association) World Congress of Psychiatry*, Bangkok, Thailand.

## Selected Service, Outreach & Teaching

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**Teaching:** The New AI Story: Empowering Humans In The Age Of Machines (University of Washington, Winter 2026), Visual Storytelling (Online Museum of Central Asian Women, 2024) Feminism and Psychology (Open Society University Network, Fall 2022), SPSS and Statistics for Research (American University of Central Asia, Spring 2022), Psychogenetics (AUCA, Fall 2022), Research Writing Tutor, Statistics Tutor (AUCA Writing and Academic Resource Center, 2020–2023)

**Art, illustration and design:** suicide prevention (Salimova, Ph.D., 2024), domestic violence (Kloop, 2019), child labor (Azattyq, 2019), microcredits (Azattyq, 2020), mental health (Boktukorgon, 2018–2020)

**Outreach, advocacy, and mentoring:** Pre-Application Mentorship Service (University of Washington, 2024–2025), Academic Advising Office (AUCA, 2021–2023), private mentor for 40+ women from disadvantaged backgrounds (2023–present), Student Advisory Board (UCLA Global Campus Violence Prevention Network, 2022–2023), outreach and advocacy manager (Labrys Kyrgyzstan, 2016–2018)

**Organization:** TGIF Chair (University of Washington, 2025), PriMera Scientific Engineering (2023), Student Senate Chair (AUCA, 2021–2023), Project Lead (@growthhungry, 2021), Campaign Developer (USAID & Open Line, 2020), Co-lead (Teenage and Youth for Justice and Equality, 2018–2020)

## Skills

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**Programming languages:** Python, SQL, Git, Latex (proficient); C++, Java, JavaScript, R, Bash (experienced)  
**Natural languages:** English (C2), Russian (native), Kyrgyz (B2), Turkish (A2), French (A2)