Deniz Nazar (Nazarova)

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Research Interests

AI Safety & Reliability, LLMs and Agents, Human-Centered NLP, Proactive Learning, Mental Health

Education

University of Washington | Seattle, US   **09.2024 – current**
Ph.D. in Computer Science & Engineering   GPA: 3.84/4.0

    Supervisors: Yulia Tsvetkov, Tim Althoff

    Completed coursework: Machine Learning, Natural Language Processing, Security and Privacy, Data Visualization, AI Agents

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

American University of Central Asia | Bishkek, KG   **09.2018 – 06.2023**
Bachelor's Degrees   GPA: 3.91/4.0

    Majors: Software Engineering, Psychology

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

    Mentors (Google Research): Dimitri Kanevsky, Artem Dementyev, Milagros Escoredo

    Software Engineering Thesis: "Application of Artificial Intelligence in Mental Healthcare: Generative Pre-trained Transformer 3 (GPT-3) and Cognitive Distortions"

    Psychology Thesis: "Engineering and Estimating Efficiency of the Artificial Intelligence Chatbot in Reducing Cognitive Distortions among AUCA Students"

Nazarbayev University | Astana, KZ   **08.2016 – 06.2017**
Foundation Year Program   GPA: 3.86/4.0

    Specialization: Biology/Chemistry

    Main Research: Benzodiazepines as a modern treatment for young adults with chronic insomnia

    Supervisor: Lucy Harrison

Publications

- **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
- **Nazarova, D.**, Akhmedova, G., Uralova, N., & Dzardanova, S. (2025). *Femicide dataset: Uzbekistan* [Data set]. Conducted as part of a joint initiative of UN Women. 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. https://cabar.asia/en/a-real-man-never-asks-for-help-exploring-why-men-in-kyrgyzstan-are-four-times-more-likely-to-die-by-suicide
- Djordjevic, J., Gagoshashvili, M., Andrew, P., Veloso V., Palaniswamy, P., Leung, J. P., Nikolic, T., **Nazarova, D.**, Izaias, A. I., Abdel-Nabi, D., Mungure M. D., Tricia, T., & Atay, H. (2022). *A Look into Frida's Participatory Grantmaking Model. "Resourcing Connections: Reflections on Feminist Participatory Grantmaking Practice"*. FRIDA. https://youngfeministfund.org/a-look-into-fridas-participatory-grantmaking-model-resourcing-connections-reflections-on-feminist-participatory-grantmaking-practice/
- 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 Work Experience

EPAM Systems | Junior Data Engineer   **02/2024 – 07/2024**
- 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.

EIWA, AI Doula | ML Engineer   **10/2023 – 09/2024**

EIWA reached the top-5 result at the Glovo KG Startup Competition (out of more than 250 companies that 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.

[**USAID WSpark Women in Tech**](#) **& Barys Bot | Full-Stack Web Developer**   **05/2023 – 12/2023**
- 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 (Python, Django, PostgreSQL, AWS).

Neuromatch Academy | Summer ML Intern   **2021, 2022, 2024**

Focus Areas: NeuroAI, machine learning, computational neuroscience, cognitive architectures
- 2024: Designed experiments to measure the performance of Hebbian and SoftHebbian learning as biologically plausible alternatives to backpropagation using the MNIST dataset (Python).
- 2022: Evaluated supervised learning objectives (e.g., contrastive, predictive coding, or layer-wise losses) to standard backpropagation for NLP tasks such as text classification (PyTorch).
- 2021: Trained a neural network that recognized with 93% accuracy whether a patient took a language or math test based on fMRI scans (Python, NumPy, matplotlib)

United Nations Development Programme (UNDP) | Data Analyst   **10/2023 – 01/2024**
- Completed analysis of qualitative (MAXQDA) and quantitative (SPSS) data for the media campaign.

Selected Awards and Scholarships

2025	Wissner-Slivka Endowed Fellowship
2024	Paul G. Allen School First-Year Ph.D. Fellowship
2023	**Best Thesis Award, Software Engineering Department**
2023	**Best Thesis Award, Psychology Department**

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
2021	Double Major Scholarship – *covers tuition for the fifth year to complete the second major*
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 the entire duration of 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.*

Conferences & Seminars

- "Research of Femicide Cases in Central Asia". Participant. UN Women. Almaty. May 26-28, 2023
- "Is AI Ready to Work with Mental Health of Humans?". Speaker. AI club. Bishkek. Nov 22, 2023
- "Application of AI in Mental Healthcare". FTConference. San Francisco. Nov 2-3, 2023
- Women and Research. Visiting Scholar. Bard College. Annandale-On-Hudson, NY. March 6-10, 2023
- In AI We Trust. Reviewer. Yehuda Elkana Fellowship. Vienna, Austria. June 22-25, 2021
- #SayEnoughAsia. Workshop Lead. Oxfam. Bangkok, Thailand. January 20-22, 2020
- Game Changer Hackathon. Prague Civil Society. Bishkek, Kyrgyzstan. September 26-28, 2019
- Stanford Big Data by Prof. Jennifer Widom. Bishkek, Kyrgyzstan. September 11-13, 2019
- Transforming the Normal in Asia. Workshop Lead. Oxfam. Bangkok, Thailand. October 1-4, 2018

Selected Community Service

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), private programming and writing tutor (2023-2024)

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

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)

Languages

Programming: Python, SQL, Git, Latex (proficient); C++, Java, JavaScript, R, Bash (experienced)

Natural: English (C2), Russian (native), Kyrgyz (B2), Turkish (A2), French (A2)