Vsevolod Suschevskiy

Machine Learning | Virtual Labs | Social&Behavioral Sci

xAI   Causal ML   Design of Experiments   Reproducibility   Network Science   Mechanism-based explanations

vvseva@u.northwestern.edu | vvseva.quarto.pub | Evanston, IL, USA

Research Experience

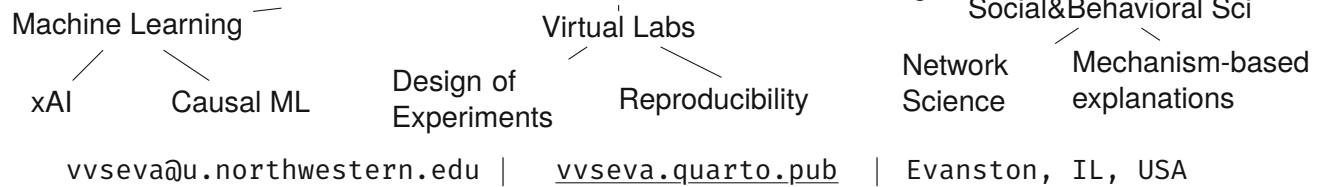**Northwestern University**   June 2022 - present
Graduate Research Assistant   Evanston, IL

- Tools and practices to support reproducible experimental research
- Designing virtual lab experiment for studying collaboration in Human-AI teams
- Data-Driven research of Human-AI Communication in teams, using multilayer-ERGMs (paper in progress)
- Designing Transition from Wizard of Oz-style experiment to a digital experiment powered by LLMs and deployed on Empirica.ly platform (MVP ready)
- Interactive survey to study unfriending at Facebook (pre-pilot)
- Grant proposal writing
- Undergraduate interns supervision

Centre For The Science Of Learning & Technology, University of Bergen Jan. 2020 – Jun. 2021
Research Assistant   Bergen, Norway

- Created a virtual lab environment for reproducible experimentation on **course choice motivations and recommendation systems** for exchange students, using Shiny, Elasticsearch, and TensorFlow.
- 10+ Think aloud interviews, 50+ user test participants

Education

Northwestern University   June 2022 – present
Graduate Student in Technology and Social Behavior   Evanston, IL, USA

- Study the adoption of AI in teams and organizations from a socio-technical perspective and tools and practices to support reproducible experimental research
- Relevant coursework: COMP SCI 496: Visualization for Scientific Communication (Matthew Kay); COMP SCI 496: The Design of Technological Tools for Thinking and Learning (Uri Wilensky); COMP SCI 415 Design, Technology, & Research (Haoqi Zhang); MTS 519 Responsible Conduct Research; COMP SCI 497 Explanation and reproducibility in data-driven science (Jessica Hullman); MTS 525: Qualitative Methods for Understanding Technology Use and Design (Duri Long); MORS 526 Micro-Organizational Research Methods (Adam Waytz)

HSE University   Sept. 2020 – Jun. 2022
MSc Information Systems and Human-Computer Interaction   St.Petersburg, Russia

- Thesis: "Experiments in Designing Personalized Motivational Systems" is a set of virtual labs designed to test the idea of self-nudging in crowdsource workers settings

HSE University, University of Bergen   Jan. 2017 – Jun. 2020
BA Sociology and Social Informatics   St.Petersburg, Russia, Bergen, Norway

- Thesis: "Computational Modelling Frameworks in Sociology: Scientometric Analysis" is a sociology of science work on how researchers transfer their epistemic beliefs from the original discipline into applied theoretical frameworks and computational representations
- University of Bergen: Research Topics in Technology Enhanced Learning; Knowledge Representation and Reasoning

References

- Matthew Kay, Assoc. Prof. Northwestern University, Department of Computer Science and Communication Studies, mjskay@northwestern.edu

- Barbara Wasson, Director, Centre for Science of Learning and Technology, Prof. Department of Information Science and Media Studies, University of Bergen, barbara.wasson@uib.no

- Ilya Musabirov, incoming Educational Leadership Assist. Prof., Department of Computer Science, University of British Columbia (2018-2021: Senior Lecturer at HSE University), ilm@cs.ubc.ca

Publications and Manuscripts

Suschevskiy, Vsevolod, DeChurch, L., & Contractor, N. (in progress). The structure of Leadership in Human-AI Teams. *The 28th ACM Conference on Computer-Supported Cooperative Work and Social Computing*.

Cruz Cortés, E., Lee, J., Lehoucq, E., & Suschevskiy, Vsevolod. (2024). A comment on "se habla español: Spanish-language appeals and candidate evaluations in the united states". *I4R Discussion Paper Series*, (165). Retrieved October 19, 2024, from https://econpapers.repec.org/paper/zbwi4rdps/165.htm

Musabirov, I., Suschevskiy, Vsevolod, & Song, H. (2024). Adaptive Experimentation in Learning Engineering: Communication and Choice Strategies. A Study Design. *Learning @ Scale 2024, 5th Workshop on A/B Testing and Platform Enabled Learning Research*.

Suschevskiy, Vsevolod & Khalil, M. (2021). Creating a Course Recommendation System for Exchange Students. *Companion Proceedings 11th International Conference on Learning Analytics & Knowledge (LAK21)*.

Musabirov, I., & Suschevskiy, Vsevolod. (2020). Teaching Undergraduate Sociologists Modeling and Computational Thinking. *Proceedings of the 51st ACM Technical Symposium on Computer Science Education*, 1368. https://doi.org/10.1145/3328778.3372687

Marchenko, E., & Suschevskiy, Vsevolod. (2018). Analysis of Players Transfers in Esports. The Case of Dota 2. *Proceedings of the 22nd International Academic Mindtrek Conference*, 255–257. https://doi.org/10.1145/3275116.3275151

Suschevskiy, Vsevolod & Marchenko, E. (2018). Network Analysis of Players Transfers in eSports: The Case of Dota 2. In D. A. Alexandrov, A. V. Boukhanovsky, A. V. Chugunov, Y. Kabanov, & O. Koltsova (Eds.), *Digital Transformation and Global Society* (pp. 468–473). Springer International Publishing. https://doi.org/10.1007/978-3-030-02843-5_38

Conference presentations

Suschevskiy, Vsevolod, Javalagi, A., Sean, F., Hoshi, F., Cueva, X. L., Garcia, J., DeChurch, L., & Contractor, N. (2023, November). Approaches to Investigating Human-AI Teams: Transition from the Wizard of Oz to LLM-Powered Agents [Conference Presentation at 2023 Conference on Digital Experimentation @ MIT (CODE@MIT)].

Suschevskiy, Vsevolod, Larson, L., Malte, J., DeChurch, L., & Contractor, N. (2023, June). Exploring the Structure of Human-AI Interaction Networks: The Impact of AI Teammate Modes on Collaboration and Performance [Poster Presentation at The International Conference for Computational Social Science (IC2S2)].

Suschevskiy, Vsevolod & Musabirov, I. (2022, October). Experiments in Designing Personalized Motivational Systems [Poster Presentation at Northwestern's Lambert Conference on the Future of Human-Computer Interaction + Design, Evanston]. https://bit.ly/HCI_D_EXPERIMENT

Suschevskiy, Vsevolod & Musabirov, I. (2020, July). Agent-Based Modeling of Transfers Between Teams in Esports [Virtual poster, http://www.pfeffer.at/sunbelt/talks/1092.html].

Suschevskiy, Vsevolod, Musabirov, I., Buligin, D., & Marchenko, E. (2019, July). Network Analysis of Global Transfers in Dota 2 [*Amsterdam, Netherlands,* Poster, https://2019.ic2s2.org/posters/].

Volunteer Experience

HELPDESK.MEDIA   Sept. 2022

- Provided consultations on how to safely escape areas affected by war.

Women Data Leaders in Russia   Sept. 2018 – Jun. 2020

- Organized poster session; Interviewed Jana Diesner and Milena Tsvetkova; Edited video for youtube channel

Awards

Toloka Research Grant (Yandex LLC) : Supported my MSc thesis experimental research on behavioural nudges and boosts. Feb 2022.

Peter and Adrienne Barris Outstanding Teaching Assistant : Northwestern Computer Science honors and recognizes students who demonstrate excellence in computer science mentoring and teaching. Spring 2024 Social Network Analysis class. (COMP-SCI 341)

Teaching Experience

Northwestern University   Mar. 2023 - Aug. 2024
Graduate Teaching Assistant   Evanston, IL

- Fall 2023 COMP SCI 330: Human-Computer Interaction; 200+ undergraduate students; lo-fi paper prototyping; Figma; Prof.: Matthew Kay

- Spring 2023, Spring 2024; MSC 492: Leading & Leveraging Networks; 50+ graduate students; Prof.: Noshir Contractor

- Spring 2024, COMP SCI 341: Social Network Analysis; 75+ STEM and non-STEM students; Prof.: Noshir Contractor

- Fall 2024, Kellogg Executive Education: Leading collaboration; 50+ adults students; Prof.: Leslie DeChurch

HSE University, European University At St. Petersburg   Sept. 2018 – Jun. 2022
Lecturer 2020-22, Teaching Assistant 2018, 19   St.Petersburg, Russia

- Data Science Minor: CS0 and CS1 for non-STEM majors; tidyverse, tidymodels, shiny; offline to online transition

- MSc UX Analytics and Information System Design: Research Seminar; Into to experiments in HCI

- MSc Data Analytics for Politics and Society: 15+ graduate students; sklearn, pandas, crowdsourcing

- Data Visualization: MSc Applied Data Analysis (PANDAN); Grammar of Graphics, ggplot2, tableau; 20+ professional and graduate students

- Theory Construction and Model Building: Undergraduate elective for Sociology Major students; Integration of theoretical frameworks, e.g. Desire-belief-opportunity, Theory of Planned behavior, Bounded rationality with Computational representation, e.g. production rules, probabilistic models; NetLogo.

Industry Experience

Core Analytics at VK (Largest social networking platform in Russia)   July - Sep. 2021
Research Internship   St. Petersburg, Russia

- Population Scale Social Network Analysis: Validating Robin Dunbar's concept of social circles on dyadic interactions, examining dynamics of social circles. Privacy-focused design recommendations.

- VK Teach Talk video (in Russian)

Skills

Data analysis : R (**tidyverse**, igraph, rvest, bnlearn, ERGM); Python (pandas, pyspark, networkx)
Machine Learning : R (**tidymodels**, rpart, LDA, STM); Python (Tensorflow, spacy, gensim, huggingface, LLMs)
Visualization : R (ggplot2, visNetwork, plotly, shinydashboard), Tableau; Python (Seaborn, Plotly)
Interactive web apps : R (Shiny), JavaScript (empirica.ly)
Data Bases : SQL (ClickHouse, MongoDB), noSQL (Elasticsearch)
All other random stuff : Linux, AWS, git, NetLogo, Prolog, Open Broadcast Software, Adobe Premiere Pro, LaTeX

Languages

Russian : Native
English : C1/C2; IELTS 7.5 2021
French : beginner