

VITALII ZHUKOV, PHD

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EXPERIENCE

DATA SCIENCE – 5 YEARS, SOFTWARE ENGINEERING – 6 YEARS, PROJECT MANAGEMENT – 2 YEARS

Researcher Computational Physiology Laboratory 2019 - Present

- Led 3 research projects, examining laws underlying human behavior and achievement in highly competitive environments resulting in journal manuscripts and conference presentations.
- Designed novel analytical methods and applied inferential tools and fine-tuned large language models for hypothesis testing, classification, and forecasting.
- Mentored 2 undergraduate students, resulting in their recognition with awards for outstanding research achievements.
- Instructed 4 classes: Statistical Methods in Research, Ubiquitous Computing, Data Structures and Algorithms, Introduction to Programming for more than 2000 students in Computer Science department.
- Developed a web-based system to collect, analyze, and visualize user surveys and performance data, optimizing course complexity and flow (4 semesters data, ~500 weekly surveys).
- Stack: R (tidyverse, dplyr, car, lme4, caret, MASS, shiny, ggplot2, plotly), Python (NumPy, Pandas, SciPy, Keras, TensorFlow), JS, HTML, CSS, MySQL, PostgreSQL, GPT-3.5, Llama2, ALBERT.

Project / Delivery Manager Luxoft / Deutsche Bank 2017 - 2018

- Managed 3 teams (53 FTE) of engineers and data scientists, ensuring delivery of projects in the security domain.
- Led the execution of two Proof of Concept initiatives for new products (user studies, concept/usability testing).
- Collaborated with various business and product teams to prioritize hypotheses and research questions in strategic planning. Participated in design evaluation.

Head of Automation / Software Engineer General Satellite 2010 - 2017

- Created and led the Automation Department (4 FTE): monitoring, forecasting, and analytical tools development.
- Designed and implemented a customer behavior analytics system, improving customer segmentation models (12.5 million users). Strengthened behavior analysis capabilities (customer research), enhancing strategic planning resulting in 8% revenue increase.
- Stack: Python3 (TensorFlow, Celery, Tornado), Elasticsearch, Grafana, Postgres, PowerShell, Bash, Debian.

EDUCATION

Doctor of Philosophy (Ph.D.) University of Houston

- Computer Science, GPA: 3.87.
- Thesis topic 'On the Mechanism of Competition and Outcomes in Schools of Thought and Other Realms of Human Endeavors'.
- President - Computer Science Graduate Students Association (CSGSA).

Master of Science (M.S.) St. Petersburg Polytechnic University

- Mechanical Engineering.

SKILLS

- Python; R; SQL; C++; Swift; Bash; PowerShell.
- Git; Atlassian Jira/Confluence; Redmine; OSF; Zabbix; Wireshark; Linux; Debian; MS Server.
- LLM System design; Prompt Engineering, RAG; ITIL; SDLC; Agile; Scrum.

RESEARCH

- [IN PREPARATION] Zhukov, Tsiamyrtzis, Pavlidis (2024) Modeling of Competitive Human Performance.
- [UNDER REVIEW] Zhukov, Pavlidis, Dukes (2023) Quantitative History of Affectivism.
- [CONFERENCE PAPER] Zhukov et al. (2022) Convergence in Affective Sciences, ISRE 2022, LA CA.
- [CONFERENCE PAPER] Hasan, Tsiamyrtzis, Zhukov, Manser, Wunderlich, Pavlidis (2023) ACM CHI 2024.
- [PUBLISHED] Zhukova, Li, Zhukov, Grigorenko (2023) Children, 10(8), p.1367.