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VITALII ZHUKOV, PHD

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EXPERIENCE

Data Science – 5 years, Software Engineering – 6 years, Project Management – 2 years

Researcher

Affective & Data Computing Laboratory

2019 - 202

- Focus: Human performance in complex systems emphasizing the application of Large Language Models (LLM).
- Led 3 research projects, examining laws underlying achievement in highly competitive environments.
- Architected and produced the probabilistic human performance estimation method and QC technique.
- Utilized fine-tuned LLMs to create and integrate solutions for classification and forecasting.
- Stack: R (tidyverse, dplyr, car, lme4, caret, MASS, shiny, ggplot2, plotly), Python (NumPy, Pandas, SciPy, PyTorch, Keras, TensorFlow), MySQL, PostgreSQL, GPT-3.5, Llama2, ALBERT.

Instructional Assistant

University of Houston

2019 - 2023

- Instructed 4 classes: <u>Statistical methods in research</u>, <u>Ubiquitous computing</u>, <u>Data Structures and Algorithms</u>, <u>Introduction to Programming</u> for more than 2000 students in Computer Science department.
- Implemented new technologies, frameworks, and standards in the curriculum and student mentoring.
- Personal teaching philosophy anchored to the following principles: Practical Application, Critical Thinking, Holistic Understanding, Effective Communication, Feedback and Adaptation.
- Technologies used: R, Python, Swift, C++, JS, HTML, CSS.

Project / Delivery Manager

Luxoft, DXC / Deutsche Bank

2018

- Managed multiple teams of engineers, data scientists, analysts, ensuring delivery of key projects.
- Successfully managed the delivery of three major releases and led the execution of two Proof of Concept initiatives for new products.
- Communicated with, coached, and coordinated international employees (53 FTE in 4 countries).
- Tools & Frameworks: Jira, Confluence, MS Office, Agile, Scrum, SDLC, PRINCE2.

Software Engineer / Head of Automation

General Satellite

2010 - 2017

- Created and led Automation Department. Focus: monitoring, forecasting, and analytical tools development.
- Developed four software/hardware products for Digital Video Broadcasting analytics and monitoring.
- Stack: Python3 (TensorFlow, Celery, Tornado), Elasticsearch, Grafana, Postgres, Oracle, PowerShell, Bash, Debian.

EDUCATION

Doctor of Philosophy (Ph.D.)

University of Houston

2023

• Computer Science, CGPA: 3.9

Masters (M.S.)

St. Petersburg Polytechnic University

2012

Mechanical Engineering

Professional Training

ITMO, St. Petersburg Polytechnic University

2014 - 2015

Database Development and Administration, Python Software Development

LEADERSHIP ACTIVITIES AND AWARDS

- Completed: Google's Foobar challenge, 2022
- President of the Computer Science Graduate Students Association, University of Houston, 2019 2021
- Employee of the year, General Satellite, 2016

LANGUAGES, TECHNOLOGIES, AND FRAMEWORKS

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

PUBLICATIONS

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