



[vvzhukov.github.io](https://github.com/vvzhukov)



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# Vitalii Zhukov



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Researcher

**Affective and Data Computing Lab, UH**

2022 - Present

Researcher

**Computational Physiology Lab, UH**

2019 - 22

- Conducted research with a primary focus on analyzing human performance within complex systems, contributing to a deeper understanding of environmental, cognitive, and behavioral aspects.
- Led a comprehensive research project that investigated the fundamental principles governing success in intensely competitive settings, resulting in valuable insights for optimizing performance.
- Designed and developed a sophisticated probabilistic human performance estimation methodology, enhancing the accuracy of performance predictions and enabling data-driven decision-making.
- Spearheaded the development of automated tools and processes to streamline data collection, processing, quality control, and statistical analysis, significantly reducing manual effort and enhancing research efficiency.

Graduate Teaching Assistant

**University of Houston**

2019 - Present

- Statistical methods in research (R, Python) Designed lab curriculum, instructed hands-on data analysis.
- Ubiquitous computing (Swift) Implemented a web system for students' performance and feedback.
- Data Structures and Algorithms, Introduction to Programming (C++) Developed practical class materials.

Project / Delivery Manager

**Luxoft, A DXC Technology Company**

2018

- Led the software development efforts within the Deutsche Bank Security and Authorization Department, driving innovation and excellence in Agile product development.
- Collaborated closely with customer managers to shape the product vision, develop strategic plans, and ensure the successful delivery of projects, aligning with customer requirements and objectives.
- Effectively scaled the department's engagement, orchestrating a substantial increase from 18 full-time employees (FTE) to 53 FTE, optimizing resource allocation and productivity.
- Demonstrated strong interpersonal and leadership skills by effectively communicating with, coaching, and coordinating a diverse team of international employees spanning four countries, fostering a collaborative and high-performing work environment.



Software Engineer / Team Lead

**GS Labs, General Satellite Group**

2010 - 17

- Progressively advanced through professional development ranks from Technical Support Engineer (TSE) 2 to TSE 3, ultimately achieving the roles of Software Engineer (SE), Team Lead, and Chief of Automation Department, showcasing dedication and expertise in both technical and managerial roles.
- Played a pivotal role in developing internal software and hardware solutions tailored to enhance the Digital Video Broadcasting infrastructure, contributing to increased operational efficiency and system reliability.
- Pioneered the establishment of the Automation Department, taking charge of continuous integration/continuous delivery (CI/CD) and monitoring tools, streamlining workflows, and fostering a culture of automation to improve productivity and performance.
- Stack: Python3, Celery, Tornado, Redis, Postgres, Bash, Debian GNU/Linux

Doctor of Philosophy (Ph.D.)

**University of Houston**

[Exp.] Dec. 2023

- **Computer Science**, Dissertation topic 'Performance in Complex Systems of Experts'
- CGPA 3.87



Master of Science (M.S.)

**Peter the Great St. Petersburg Polytechnic University**

2012

- **Mechanical Engineering**, Thesis topic 'Vibro Jaw Stone Crusher'

## Recent Personal Projects

- 'Responder' app (2023) LLM based email processor & generator.
- 'ACDC Lab' website (2022)
- 'iOrator' app (2022) Real time speech recognition and coaching.
- 'Scholar of the Day' app (2020 - 2021) Interactive calendar.
- 'HQC', (2020) Data quality control tool.

## Tech Stack

Python (openai\_API, json, googleapi)  
JavaScript, PHP (Joomla)  
Swift (UIKit, Speech, NaturalLanguage)  
Swift (UIKit, QuickLook, UserNotification)  
R (dplyr, ggplot2, plotly, powerLaw)



## Leadership Activities and Awards

- |                                                                                        |           |
|----------------------------------------------------------------------------------------|-----------|
| • University of Houston (UH), NSM Colleague, Member of Graduate Student Advisory Board | 2022      |
| • UH, Member of Grievance Committee                                                    | 2023      |
| • UH, Member of Academic Honesty Committee                                             | 2021, 22  |
| • UH, President of the Computer Science Graduate Students Association                  | 2019 - 21 |
| • GS Labs, General Satellite Group, Employee of the year                               | 2016      |



## Familiar languages, technologies & frameworks

- Python3; R; C++; Swift; Bash; PowerShell; SQL.
- Atlassian Jira/Confluence; Redmine; Git; PyCharm; Xcode; RStudio; LaTeX; Zabbix; Grafana; Database Workbench; MSSQL; Oracle; MySQL (MariaDB); Postgres.
- Data Analysis; Statistical Analysis; Data Visualization; Data Wrangling; A/B Testing; Quality Control.
- SDLC; Agile; Scrum; Waterfall; ITIL; PRINCE2; Business Process Management; Risk Management; ISO Standards (9001, 21500, 31000).



## Publications, Conferences

- |                                                                                                                                                                         |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| • Zhukov, V., Tsiamyrtzis, P., Pavlidis, I. (2020) Modeling of Competitive Human Performance                                                                            | [IN WORK]    |
| • Zhukov, V., Pavlidis, I., Dukes, D. (2022) Quantitative History of Affectivism                                                                                        | [IN REVIEW]  |
| • Zhukov, V. et al. (2022) Convergence in Affective Sciences, Conference ISRE 2022, LA CA                                                                               | [PUBLISHED]  |
| • Zhukova, M. A., Li, N., Zhukov, V., & Grigorenko, E. L. (2023). A Dimensional Approach to Discrepancy in Parenting Styles in Russian Families. Children, 10(8), 1367. | [PUBLISHED]  |
| • Personal technical blog, focus: LLM, API, prompt engineering, <a href="https://vzhukov.github.io">vzhukov.github.io</a>                                               | [PUBLISHING] |

