

# Vitalii Zhukov

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## Experience

Researcher **Computational Physiology Lab** 2019 – Present

- 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 3 comprehensive research projects 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, reducing manual effort and boosting research efficiency.

Graduate Teaching Assistant **University of Houston** 2019 – Present

- Instructed in the following classes: Statistical methods in research, Ubiquitous computing, Data Structures and Algorithms, Introduction to Programming. Used following technologies: R, Python, Swift, C++.
- Designed lab curriculum, instructed software development and hands-on data analysis.
- Implemented a web system for students' performance, feedback, and productivity tracking.
- Created instructional materials for hands-on laboratory sessions and delivered instruction for practical lab sessions on a regular basis, as well as occasional theory lectures.

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. 3 successful release cycles, 2 new products.
- 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.
- Coordinated department's engagement scale, 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 more than 50 international employees spanning four countries, fostering a collaborative and high-performing work environment.

Software Engineer / Team Lead **GS Labs, General Satellite Group** 2013 – 2017

- 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

Technical Support Engineer, Tier III **GS Labs, General Satellite Group** 2010 – 2013

- Delivered top-tier support for encryption systems, subscription management systems, billing, and end-user receivers used by digital video broadcasting providers.
- Successfully deployed an enterprise-level monitoring system consisting of three instances, overseeing over 5000 hosts, and monitoring 300 000 metrics.
- Streamlined operations by automating repetitive tasks using scripting languages such as Bash, PowerShell, and Python. Collaborated closely with the development team to formalize specifications for seamless integration with the monitoring system (Zabbix).

Education

Doctor of Philosophy (Ph.D.)

University of Houston2023

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

Master of Science (M.S.)

Peter the Great St. Petersburg Polytechnic University2012

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

Professional training & certification

- Database Development and Administration (2015); Software Development using Python (2015); R programming (2018); Data Scientist Specialization (2018); ITIL Foundations (2016).
- Zabbix Certified Specialist (2014); Information Privacy and Security (2020); Responsible Conduct of Research for Engineers (2020); Conflict of Interest in Research Course (2020)

Languages, Technologies & Frameworks

- Python3; R; C++; Swift; Bash; PowerShell; SQL.
- Windows Server 2008, 2012; MacOS; Debian; Ubuntu.
- Heroku; Hyper V; ESXI; Proxmox.
- 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).

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

Leadership Activities, Professional Services and Awards

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

Publications and Conference Presentations

- Zhukov, V. et al. (2022) Convergence in Affective Sciences, Conference ISRE 2022, LA CA
  - 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.
  - Zhukov, V., Pavlidis, I., Dukes, D. (2022) Quantitative History of Affectivism
  - Zhukov, V., Tsiamyrtzis, P., Pavlidis, I. (2020) Modeling of Competitive Human Performance
  - Personal technical blog, focus: LLM, API, prompt engineering, [vzhukov.github.io](https://vzhukov.github.io)
- [PUBLISHED]  
[PUBLISHED]  
[IN REVIEW]  
[IN PROGRESS]  
[BLOG]