Tlegen Kamidollayev

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EXPERIENCE

Software Engineer June 2023 - Present

Marsh McLennan |Boston, MA

- Developed API for internal and external use (Python, TypeScript, React, Docker, Vault, Helm, Kubernetes).
- Achieved cross-platform compatibility and 25% simulation speedup by re-factoring codebase and removing Excel dependencies. (Python, pylightxl).
- Ported SQL scripts to Python code and automated database querying workflow (Python, pymssql).

Graduate Research Assistant Sep. 2018 – May 2023

University of Massachusetts Lowell | Lowell, MA

- Developed and validated numerical models for plasma-liquid interaction simulations on a cluster (C++, HPC).
- Created scripts for the automated pre/post-processing simulation results (~$10^{\wedge 7}$ data points) (C++, Python, bash).

AIDevOps Software Engineering Intern May 2021 - Aug. 2021

Red Hat | Boston, MA

- Teamed with 9 people to implement an automated mechanism for suggesting Python package names based on imports supplied (Python, Docker, CI/CD).
- Created an endpoint on User API of Thoth Station. Saved hundreds of hours on the debugging of imports and package names inconsistencies in Python software (Python, OpenAPI).

Teaching Assistant Sep. 2018 - May 2019

University of Massachusetts Lowell | Lowell, MA

- Taught 90 undergraduate students to work with Plastics Engineering laboratory equipment.
- Educated necessary theoretical background to guide them in their solutions and support in debugging.

EDUCATION

University of Massachusetts Lowell *May 2023*

Ph.D. in Mechanical Engineering

Dissertation: "Modeling of Reactive Species Transport in Plasma Jet Impinging on Water"
Advisor: Juan Pablo Trelles

Moscow Institute of Physics and Technology

M.S. with Honors in Applied Mathematics and Physics *June 2017*

Dissertation: "Comparative Analysis Of Numerical Methods For Solving Melting-Solidification Problems Of Materials With A Distributed Heat Source"

B.S. in Applied Mathematics and Physics *June 2015*

Dissertation: "Numerical Analysis of Measures Effectiveness to Manage Heavy Accidents on RBMK-1000 Nuclear Reactor With the Drying of All Technological Channels"

SKILLS

Programming Languages: C++, Python, Bash, SQL, JavaScript/HTML/CSS, MATLAB
Frameworks and Libraries: React, FastAPI, NumPy, Pandas, Matplotlib, Pytest, Unittest, C++ 17, OpenFOAM
Technologies and Tools: Git, Linux, Docker, Helm, Kubernetes, Vault, CI/CD, HPC, MySQL, Markdown
Languages: English, Kazakh, Russian, and Spanish (Fluent)
Awards: Full scholarships for Bachelor's (2011), Master's (2015), and Ph.D. (2018) studies

PEER-REVIEWED PUBLICATIONS

- Parametric Study of Panel PCM–Air Heat Exchanger Designs, published in Energies (2022)
- Modeling of Reactive Species Interphase Transport in Plasma Jet Impinging on Water, published in Journal of Physics Part D: Applied Physics (2023)
- Dynamic Thermal Performance Analysis of PCM Products Used for Energy Efficiency and Internal Climate Control in Buildings, published in Buildings (2023)