Ibrokhim Iskandarov

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github.com/IbrohimI

Education

Old Dominion University, Norfolk, VA

MS in Computer Science   **Jan 2018 – Present**

GPA 3.90

University of Stuttgart, Stuttgart, Germany

MS in Theoretical Physics   **Sep 2011 – Dec 2013**

National University of Uzbekistan, Tashkent, Uzbekistan

Bachelors in Theoretical Physics   **Sep 2007 – May 2011**

Academic Projects:

- **Mountain Project:** Program generates a random terrain and places an object at a random location. The program calculates the cheapest way for the object to exit the terrain. The final trajectory will be displayed (C++).
- **Smart Dust Simulation:** A simulation which will identify the type of moving object(human, vehicle, etc.). The main program is written in C++. The visualization part is done using Gnuplot. https://en.wikipedia.org/wiki/Smartdust
- **Isosurface Stuffing:** The program will generate a uniformly sized triangular mesh of any two dimensional shape.
- **inkML/XML converter:** The program converts inkML or XML images (mathematical expressions) into png format for visualization. Furthermore, it makes a segmentation of all symbols in the equation and displays each of them.
- **Latrunculi Game:** This is a board game written in C++.
- **Detection of secondary structures in proteins:** I worked on developing a learning model to identify secondary structures in low resolution protein structures using U-net architecture.
- **Image recognition:** Recognize handwritten mathematical and physical expressions.
- **Email Spam Identifier:** This work was a part of my project in Machine Learning using python.

Professional Experience:

Graduate Teaching Assistant   **Jan 2020 – Present**

Old Dominion University (for the course: *Problem Solving and Programming*)

- Assist students during their 'Lab hours' with their assignments in C++.
- Build and review assignments and projects for the students.
- Grade students' assignments and tests (in C++ as well).

Juru Energy LLC   **Sep 2017 – Jul 2018**

Electrical Engineer in Renewable Energy Transition and Power Systems

- Calculate estimated energy production

Researcher   **Jun 2014 – Jul 2017**

University of Innsbruck, Department of Molecular Systems

- Modeling structure and dynamics of molecular ion formations in cold ion traps and diffuse molecular clouds in the Interstellar Medium.
- Analyzed experimental data with theoretical calculations using Fortran.
- Published scientific papers in European research journals.

Technical Skills

Programming: C++, C#, Python (Numpy, Scipy, Pandas, Matplotlib,TensorFlow), Fortran, Matlab

Tools – Jupyter, chimera, code::Block, Visual Studio, Eclipse , Advanced user in Microsoft Office (Word, Excel), Gnuplot, Mathematica, latex

Operating systems: Windows, linux