

JANE IVANOVA

Robotics/AI engineer with prior software development experience

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Looking for: Full-Time starting May 2023

SKILL SET

Programming: Python, Java (OCP certificate), C/C++, bash shell, JavaScript, NodeJS
Leadership: 4 years as a **team lead** for 5 developers (hired and trained), lead international projects, **mentor** to 4 developer interns, 3 years as a **soccer team captain & coach**
AI/ML skills: Classification/Regression, image processing, multi-layered models, object detection and recognition, path planning, motion planning, graph-based searches
Development stacks: git, Jenkins, MySQL, Oracle DB, InfluxDB, RabbitMQ, REST/WSDL APIs, SOA, microservices, Java Spring, Mulesoft, Salesforce, Kafka Streams
Hardware: Raspberry Pi 3B/4B, Turtlebot3, Unitree A1, MIT Mini-Cheetah, Arduino Uno
Libraries, tools: ROS, OpenCV, tesseract, TensorFlow's PoseNet, sklearn, pandas, PyTorch, PDDL, etc

EDUCATION

2021 – 2023 **MS in Electrical and Computer Engineering** at Georgia Institute of Technology, USA. GPA: 3.42

2019 – 2021 6 graduate courses in **MS in Computer Science** at Arizona State University, USA. GPA: 4.00

2009 – 2013 **BS in Applied Mathematics and Applied Physics**, MIPT, Russian Federation. GPA: 3.02

RESEARCH

LIDAR Lab Georgia Institute of Technology, Atlanta, GA

Jun' 2022 – Present

- Developing locomotion planning algorithm for quadruped robot in rebar-tying setup. Applying multi-modal and randomized sampling approaches to plan footsteps on **kino-dynamics constrained** manifolds. **C++**, **OMPL**, **Movelt**
- Improving **RRT-Connect** algorithm implementation for global path planner in challenging terrains with walking and jumping gaits for **Unitree A1** quadruped robot using informed heuristic. **C++**, **Quad-SDK**
- Planned paper submission – May, 2023

PROJECTS

At Georgia Institute of Technology, Atlanta, GA

- Data Science Club Sept' 2022 – Nov' 2022
 - Developed script for **automated aspect-level sentiment analysis** of customer reviews for the products in online shop using **OpenAI** model. **Python**, **Jupyter Notebook**
- Intro to Robotics Research Feb' 2022 – Apr' 2022
 - Implemented **ROS** package for object detection and following (**PID controller** for distance maintenance) using **OpenCV**, **odometry** and **LiDAR** sensor;
 - Developed **autonomous navigation** for Turtlebot3 to reach target avoiding unexpected obstacles on the way, and to use **SLAM** in the maze guided by wall **signs recognition**.
- Statistical Machine Learning Feb' 2022 – Apr' 2022
 - Studied **underclassification** phenomenon and **training efficiency in Neural Networks**.

- Investigated an effect of **L1 norm (Lasso) regularization** on the percent of permutations appearance in parameter columns in the weight matrix **2-layer MLP**.

- Networked Control Dec' 2021
 - In MATLAB simulated behavior of 2D Reynolds boids in fission-fusion society with abnormality behavior of a member

- Advanced Programming Techniques Sept' 2021 – Dec' 2021
Developed C++ projects to run on PACE-ICE clusters performing heavy calculations:
 - Ant game path, ant game and seeds convergence rate using **Unix multi-threading**;
 - Laser beam in a triangle cage using **OpenMP**;
 - 2D steady state heat conduction using **CUDA** on **clusters**;
 - Interactive graphical game using **SFML**;
 - 3D super bowl simulation video using **MPI**.

At Arizona State University, Tempe, AZ

- Mobile Computing Spring 2020
 - Trained **American Sign Language (ASL) classifier** for Android application using **TensorFlow's PoseNet**
- Artificial Intelligence Fall 2019
Trained a **CNN model** for an agent to reach target avoiding obstacles using 5 sensors in a simulated room.

Personal Initiative Feb' 2022 – Apr' 2022

- Developed Java-based desktop remote control app for my wheeled robot via the WiFi.
- Used **Raspberry PI, OpenCV** and **Java** for object detection and recognition;
- <https://www.youtube.com/watch?v=z0LZ2U8TaEs>

PROFESSIONAL EXPERIENCE

AMI, Remote - Data Scientist Intern Jan' 2023 – present

- Act as an architect and developer in the intrapreneurial project.
- Developing a new service that provides data warehousing architecture and predictive models (anomaly detection, usage lifespan, etc..) for hardware sensor servers. **Java, Kafka, InfluxDB, Redfish API**.

AI4ALL Summer Program at GaTech, Atlanta, GA - Graduate Instructor Jun' 2022 – Jul' 2022

- Promoted equity and inclusion by teaching AI/ML fundamental concepts and programming on Python to diverse high-school students. **Python**.

Mentor Graphics (Siemens), Remote - Independent Contractor (Mulesoft Dev) May' 2019 – Nov' 2021

- Built integration solution for defects management systems. **Mulesoft, RabbitMQ, SAP, Salesforce, T-SQL, Oracle DB**

FundCount, Remote - Independent Contractor (Lead Integration Engineer) Apr' – Nov' 2019

- Implemented **Java** application with OCR for parsing billing printouts to Excel files. Developed integration web-services to import/export system backups, automated billing, and established DevOps flows for the development team. **Java Spring, Zapier, Tesseract-OCR, Node.JS, Docker, MySQL**.

Mentor Graphics (Siemens), Wilsonville, OR – Ind. Contractor (Mulesoft Dev) Jul' – Oct' 2019

- Built a configurable integration framework that supported complex distributed business flows for customer management. **Mentored 2 interns. Mulesoft, RabbitMQ, SAP, Salesforce, T-SQL, Oracle DB**

Time off Feb' 2019 – May' 2019

- Focused on restoring work-life balance, education and personal robotics project: map exploration and collaborative tasks execution by decentralized networked agents.

CT Consulting, Moscow, Russian Federation - Lead Integration Specialist Aug' 2017 – Feb' 2019

Worked as a consulting developer for numerous companies. Worked with **SAP, Salesforce, Mulesoft**, other enterprise software **iPaaS** and **SaaS** for **CRM, ERP** and **cloud/on-premis/hybrid integration**.

- **Managed team's daily activities**, assigned tasks to members, set team's and personal priorities and conducted code and performance review.
- Lead multiple international integration projects in pharmaceuticals, and healthcare industries. Acted as an architect and a lead developer in the **clinical trials automation** for the phases I-III.
- Helped global pharmaceutical company dramatically reduce length of **clinical trials** by developing automated systems for trials and adversary events management. **For outstanding work** was promoted to lead projects for international clients: France, Spain, Mexico, India.

Masterdata, Moscow, Russian Federation

- **SAP XI/PI Integration Consultant** **Jul' 2015 – Aug' 2017**
 - Helped company's clients, designed and implemented multiple integration projects in telecommunications, pharmaceuticals, cement manufacturing, brewery and e-commerce industries in roles of **SAP PI/PO Consultant/Developer / System Analyst / Informatica Cloud Developer**.
- **SAP Developer** **Nov' 2013 – Jul' 2015**
 - Delivered numerous projects in telecommunication industry, solving complex problems that client's team required expert help with. Worked with **SAP, SAP HCI, Salesforce, Informatica Cloud**
- **SAP Developer Intern** **Aug' 2013 – Nov' 2013**
 - Improved performance of legacy programs by 40% by updating sorting algorithms and introducing optimal db indexing. Assume SAP Developer position right after.

PERSONAL INTERESTS

Keen on running and playing soccer. During study at MIPT established women soccer intramural competition, trained department's team and lead it to victory in championship. Won awards such as "the best player" and "the best goalkeeper" in tournaments in and outside of the university.