# **Izzat Mukhanov**

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# Work Experience

•	Software	Development	Engineer
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2016 - now

- Kindle: Maintenance of reader applications for Mac and PC (Qt, C++)
- Prime Air: Autonomous 30 min delivery system by drones

# Successfully designed, implemented and delivered (used in production):

- Highly scalable (multi-threaded) vehicle simulator that supports time accelerations.
- Vehicle-agnostic autonomous path planning system.

# Significant contributions:

- Improvement and maintenance of multiple AWS web services.
- Operational (metric reporting, package management system, testing strategy, etc.).
- Terrain client (to query terrain information for a geographical area) library.

## Company: **Amazon**

• **Engineer**, developer (C, C++, Python, JavaScript)

2014 - 2016

Improvement and development of a cross-platform library <u>libpointing</u> which allows direct access to the USB-HID pointing devices and can apply different transfer functions to the raw input Creation of *Java*, *Python*, *Node.js* bindings and distribution with *npm*, *apt*, *brew*, etc.

Company: **INRIA** 

• Master's Project (C++, Python, MATLAB)

2014 (6 months)

Implementation of Pedestrian Detection and Tracking system [thesis] [video] using Computer Vision and Machine Learning algorithms
Laboratory: IRCCyN

• Intern (Python)

2013 (4 months)

Development of <u>OpenSymoro+</u> (SYmbolic MOdeling of RObots), including 3D visualization and UI using *PyOpenGL* and *wxPython* Laboratory: <u>IRCCyN</u>

• **Software developer** (Objective-C)

2011 - 2012

Development of client-server applications for iOS and Cocos2D games Company:  $\underline{\text{SSD}}$ 

• **Intern**, software developer (C/C++)

2010 - 2011

Low-level API development for Blu-ray disks processing Implementation of the logging system for the project Company: <u>ProDVD</u>

• **Intern**, software developer, instructor (C#.NET)

2009 - 2010

Application development for book catalogization of the city libraries Database management (Microsoft SQL)

Company: BePro

#### Education

M.S. in Robotics, Control Engineering, Applied Informatics
 École Centrale de Nantes

2012 - 2014

• B.S. in Telecommunications

<u>Tashkent University of Information Technologies</u>

2007 - 2011

### **Professional Skills**

- Knowledgeable:
  - O Java, Python, C++
  - Multi-threaded, real-time applications
  - AWS infrastructure
  - O Design Patterns, Test Driven Development, Continuous Integration/Deployment
- Familiar:
  - Kafka, Websockets, Netty, Protobuf
  - O JavaScript, Node.js, Three.js
  - o MATLAB, Objective-C, Pharo, C#.NET, PHP, SQL
  - OpenGL, OpenCV
  - ROS (Robot Operating System)
- Theoretical background:
  - Path planning algorithms
  - o Math, Optimization, Simulation
  - o Computer Vision, Machine Learning, Artificial Intelligence
  - o Robot Programming, Modeling and Control

# Miscellaneous

- Highly adaptable in quickly changing technical environments with very strong organizational and analytical skills
- Excellent interpersonal and communications skills
- Life-long learning oriented
- Driver's license
- Publication: <u>OpenSYMORO: An open-source software package for Symbolic Modelling of</u>
   <u>Robots</u>, 2014 IEEE/ASME International Conference on Advanced Intelligent Mechatronics
   (355)

# Languages

- English fluent
- French fluent
- Russian native
- Uzbek native

# **Hobbies**

- Following online courses (MOOCs)
- Foreign languages
- Gym and cycling
- Reading