

# Izzat Mukhanov

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Location: Paris, France

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## Work Experience

- **Software Development Engineer** 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 algorithms.
  - **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 [libpointing](#) 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 [OpenSymoro+](#) (SYmbolic MOdeling of RObots), including 3D visualization and UI using *PyOpenGL* and *wxPython*  
Laboratory: [IRCCyN](#)
- **Software developer** (Objective-C) 2011 – 2012

Development of client-server applications for iOS and Cocos2D games  
Company: [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: [ProDVD](#)
- **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](#) 2012 – 2014  
École Centrale de Nantes
- B.S. in Telecommunications 2007 – 2011  
[Tashkent University of Information Technologies](#)

## Professional Skills

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