

# AIBAR IBRAYEV

✉ aibar.ibrayev@nu.edu.kz ☎ +7(700)-732-73-80

## EDUCATION

---

**Nazarbayev University**  
*B.S in Computer Science*

*August 2021 - Present*

## SKILLS

---

<b>Programming Languages:</b>	C, C++, Python
<b>Databases:</b>	SQLite, Postgres
<b>Other:</b>	Django, Git, Linux, HTML5, CSS3, SolidWorks, Maple
<b>Robotics:</b>	Basics of mechanics, ROS framework

## EXPERIENCE

---

**Stanford University, CA, USA**  
*Image Analysis (Python) Intern*

*January 2020 - March 2020*

- Studied cell migration of glioblastoma cancer cells in different stiffness media
- Performed cell tracking, velocity, and morphology analysis on microscope cell images (Python), collected by Dr. Patel lab
- Performed statistical analysis (Mann-Whitney u-test, ANOVA) for different treatments of glioblastoma cancer cells.

## PROJECTS

---

### **Website alashculture.org**

- The website contains information about disappearing aspects of Kazakh culture and connects people with eagle hunters, artisans, and grooms around Kazakhstan.
- Used **python Django** with SQLite3, Bootstrap4 to build the website and hosted it on DigitalOcean

### **Steppe.Technology organization**

- Co-founded an organization Steppe.Technology, and worked on projects: **Self-Assembling Yurt, Horse Riding Simulator, Legged Robot**
- Implemented **RRT path planning** algorithm for autonomous navigation of Legged Robot on ROS(Robot Operating System)
- Implemented **mapping method SLAM**(Simultaneous Localization and Mapping) using ROS package gmapping based on particle filter pairing algorithm
- Created a ROS package with Python that gives access to the data about the position of the robot. It allows the user to manually adjust the robot's coordinates if needed
- Tested the implementation in the Gazebo simulation environment
- Solved equations of motion and generated codes in Mapple Software for the following projects: self-assembling yurt, saddle-horse riding simulator

## CLUBS AND ACTIVITIES

---

**ACM Mobile Development SIG club**, Nazarbayev University

*August 2021 - Present*

**ACM ICPC club**, Nazarbayev University

*August 2021 - Present*

Studying competitive programming, participating in weekly contests