SHYNGYSKHAN ABILKASSOV

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EDUCATION

Nazarbayev University, Astana   *August 2017 - May 2021*
BSc in Robotics and Mechatronics, Minor in Computer Science.   Overall GPA: 3.76, Top 5%
School of Engineering and Digital Sciences Student Council Representative

WORK EXPERIENCE

Google Summer of Code, JdeRobot   May 2019 - August 2019
Open Source developer

· Developed **indoors localization, goal navigation, item pick-and-place logic,** and **resting behaviour** for full scale autonomous task completion for warehouse robot
· Improved local navigation task performance for robot in complex interior environment. Robot reaches desired destination **2 times faster** than previous implementation
· Integrated proper transformations for sensor frames, introduced proper ROS topics messaging and naming, and integrated *SLAM, AMCL, Navigation stack* ROS packages into the Gazebo robot model

ALARIS Laboratory   December 2018 - September 2019
Research Assistant at Autonomous Truck development project

· Integrated ROS messaging for *LiDAR, Camera, IMU, GPS* for remote data acquisition and control of simulation truck model
· Generated a map based on *Odometry, LaserScan* data using **SLAM algorithm**
· Implemented topic data subscription and publishment for non-ROS environment through **sockets and Flask REST service** for data visualization on web interfaces.

Zerde National Infocommunication Holding   April 2018 - July 2018
Software Engineer Intern

· Developed user-interface for search and export of documents using Elastic Search in MongoDB database.
· Implemented user activity monitoring web service in internal portal, and designed and created both **REST service and admin interface** using *AngularJS and Java Spring.*

PROJECTS

Distracted Driver Posture Classification
Retrained **ResNet50 network**, previously pretrained on ImageNet using transfer learning. **classifies the activity of the driver** and estimates their distraction level.

ai.ball
Conversational Telegram chat-bot which uses **Naive Bayes algorithm for NLP**, Yandex SpeechKit for speech recognition and synthesis and multiple Flask micro-services for API calls to various services

Ashyq Hattar
Both IOS and Android application in Kazakh developed for ease of elder population for image search, generation and sharing written on React Native. 700+ downloads. Mentioned in Forbes, Informburo.

SearchForMe
Telegram chat-bot on Python which **searches and scrapes information from Google, Yandex, Mail.ru, and Rambler**. SearchBot constantly monitors all current ratings and informs users about changes in result positions for their inputs.

ACHIEVEMENTS

1st place in HackNU International Hackathon 2019, BTS Digital case
2nd place in Astana Innovations Challenge, Smart Services
2nd place in HackNU 2018, ZeroToOneLabs case
Fellow recipient of **Bertelsmann Data Science Scholarship**
Completed Data Science, Machine Learning (Ng), Neural Networks and Deep Learning courses

SKILLS

Languages	Python, Java, C, C++, JavaScript(Node.js)
Robotics	ROS, Gazebo, OMPL, STM32 Microcontrollers, Raspberry PI
Tools & Technologies	PyTorch, OpenCV, scikit-learn, Git, MATLAB
Databases	NoSQL, GraphQL, Firebase