Autstralia

# Roman Niukhalov

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## Employment

**Software Engineer** **Canva (Australia)** **Nov 2021 – Present**
- Developing core libraries and tools to enable secure and efficient communication between microservices.

**Senior Software Engineer** **nuTonomy/Aptiv/Motional (Singapore)** **Aug 2019 – Aug 2021**
- Developed services, data pipelines and mapping software for creating High-Definition maps.
- Increased the speed of creating maps by automating the most time-consuming manual operations.

**Software Engineer** **Agoda (Thailand)** **Jun 2017 – Aug 2019**
- Reduced the end-to-end time of updating hotels' prices from several minutes to tens of seconds by re-designing and optimizing internal services.
- Reduced the load on the internal monitoring system by more than 1000% by aggregating measurements on clients before sending them to the system.

**Software Engineer** **2GIS (Russia)** **Dec 2015 – Jun 2017**
- Created an automated pipeline for importing geodata from OpenSteetMap to internal storage.
- Created a geosearch API for querying geodata features by a feature class and a bounding box.

**Software Engineer** **Center of Financial Technologies (Russia)** **Apr 2013 – Dec 2015**
- Developed a library for performing contactless payments using Android Host-base Card Emulation.
- Developed firmware for Point-of-Sale (POS) terminals.
- Reduced release cycle time by developing an automated testing framework.

## Education

**Udacity** **Summer 2018 – Winter 2019**
- Self-Driving Car Engineer Nanodegree Program.
- Coursework: Computer Vision; Sensor Fusion; Localization; Motion Control; Path Planner.

**Novosibirsk, Russia** **Novosibirsk State Technical University** **Fall 2007 – Summer 2011**
- B.S.E. in Applied Mathematics and Computer Science, June 2011.
- Undergraduate Coursework: Operating Systems; Databases; Algorithms; Programming Languages; Comp. Architecture; Linear Algebra; Calculus.

## Technical Experience

**Course Projects**
- **Advanced Lane Finding** (2018). A software pipeline to identify the lane boundaries in a video. The pipeline consists of several computer vision techniques such as color and gradient thresholding.
- **Traffic Sign Recognition** (2018). A convolutional neural network for classifying traffic sign images using the German Traffic Sign Dataset.
- **Behavioral Cloning** (2018). A convolutional neural network for predicting the steering angle of the simulated vehicle by images from its camera.
- **Extended Kalman Filter** (2018). Kalman Filter implementation to estimate the state of a moving object of interest with noisy lidar and radar measurements.
- **Highway Driving** (2019). A behaviour planning program to safely navigate the simulated car around a virtual highway with other traffic.

## Languages and Technologies

- Java; Scala; Python3; C++; C; C#; PostgreSQL; Cassandra; Couchbase; Kafka; Docker; Docker Compose; Kubernetes; AWS; Terraform; Jenkins, Gitlab CI, Teamcity, Bamboo, GitHub, Bitbucket