RENAT KHALIKOV

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EDUCATION

Hunter College of The City University of New York *Expected - May 2018*
Bachelor of Arts (B.A.) in Computer Science.

EXPERIENCE

Computer Vision and Graphics Lab March 2017 - present
Computer Vision Research *New York, NY*

- Classified Google Maps point cloud LIDAR data by labeling parked and moving vehicles with appropriate object labels.
- Developed a program that calculates the distances of labeled points to aid in neural net training.
- Contributed to 2 peer-reviewed publications on Computer Vision, featured in Computer Vision conferences like 3DV 2016 and CVPR 2017.
- Improved classification results by analyzing old classification work, fixing mistakes, and adding additional features.

Weill Cornell Medicine November 2014 - May 2016
Nanofabrication & Cancer Research *New York, NY*

- Fabricated interdigitated electrodes on a polysilicon sensor circuit using commercial complementary metal-oxide semiconductor technologies and post-processing steps.
- Optimized photolithography process by varying degrees of wafer preparation, photoresist application, exposure, developing, and etching.
- Built fluidics channel using silicone mold and PCB board for dielectrophoretic separation of cancer cells.
- Ran detection experiments of cancer cells and maintained cell culture of various cancer cell lines.

NYC Parks and Recreation June 2010 - present
Lifeguard *New York, NY*

- Supervised lifeguards, managed daily schedules, oversaw pool activities, events, and operations.
- Provided CPR and first aid to facility members.
- Improved relationship between lifeguards and patrons by providing exemplary customer service.

PERSONAL PROJECTS

Lidar Scanner December 2017

- Built a device that is capable of 3D scanning small to medium sized rooms and spaces using lasers.
- The Lidar sensor illuminates a small target in a scene and measures the distance by calculating the laser return times and wavelength. The device then calculates the height and the angle of the target in relation to its position and saves an xyz coordinate file to an SD card.
- Implemented with Arduino based microprocessor and readily available parts, the device is capable of scanning 1000 samples/sec at a 40 meter range with accuracy of about 10cm.

Motion Bike Light May 2017

- Arduino board project using ultrasonic sensor and array of LED lights that trigger when an object gets too close to the bicycle, providing extra visibility to motorists and passing cyclists.
- Implemented features such as the ability to switch between different light patterns, to use the bike light in nighttime as a passive flashing light, and the ability to use the light in the rear as a caution light or in the front as a notification system for the rider.

TECHNICAL STRENGTHS

- Proficient in C++, working knowledge in Python, Swift, Assembly, and MySQL. Familiar with Linux, MacOS, Windows 10 operating systems and command line tools.
- Research interests in Computer Vision and Graphics, Robotics, Three-Dimensional Modeling, Sensor Fusion, Range Segmentation & Registration, Detection and Classification Algorithms.