

# Yernur Nursultanov

· SOFTWARE SYSTEM ENGINEER ·

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"We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard"  
John F. Kennedy

## Education

### SFU(Simon Fraser University)

B.S. IN SOFTWARE SYSTEM

Relevant Coursework: ALGORITHMS, COMPILERS, DATA ANALYSIS, DATA STRUCTURES, EMBEDDED SYSTEMS, LINEAR ALGEBRA, MACHINE LEARNING, MULTIMEDIA, PROBABILITY THEORY, WEB INFORMATION SYSTEM

Burnaby, Canada

Sep. 2014 - Dec. 2018

## Skills

**Tools & Platforms** Bash, Cmake, Docker, Git/SVN, Jira, Review Board

**Programming Langs** C/C++, Java, JavaScript, Python

**Software Analysis** AFL-Fuzz, GDB, GoogleTest/Mock++, JUnit

**Database** MySQL, NoSQL, PostgreSQL, SQLite

**Web** Django, HTML5, Node, JS, SCSS

## Experience

### VDF Vertical

RESEARCH DEVELOPER [REMOTE]

Toronto, Canada

Sep. 2017 - Dec. 2017

- Designed and built a retrofit elevator hoistway sensor kit that runs on an open-source single-board computer, BeagleBone Green
- Worked directly with hardware vendors to integrate their modules with existing machines which significantly reduced the projected cost of the product
- Implemented POSIX-compliant sensor libraries in C/C++ for ARM architecture that increased readability and reusability of code
- Maintained test plans of team-owned components with unit and system test scripts on a Jasmine for Node.js web-server
- Configured GitLab Continuous Integration for detecting build errors and cut down overall integration time
- Constructed a wood frame prototype for testing purposes and demo session

### BlackBerry QNX

CAMERA RESEARCH

Ottawa, Canada

Jan. 2017 - Exp. Apr. 2017

- Contributed software engineering expertise in the development of the new product features through the software lifecycle
- Improved support for IP/GigE Vision camera services for ADAS 2.0 sensor fusion framework
- Resolved low/medium/high priority tickets in robust and POSIX compatible C/C++
- Optimized buffer management for image post-processing by adding synchronization of timestamps directly from cameras' drivers and eliminating the necessity of memcpying
- Implemented the real-time Max-Point ratio configuration option that allows dynamic frequency tuning of LiDAR data
- Automated testing and environment setting with bash scripts to reduce examination time and testing overhead

## Current Projects

### CHOMP

SELF PROJECT

Jun. 2019 - Present

- Designed and built a website that allows users to both monitor their weight, and to improve themselves for the future
- Developed a nutritional tracking and meal planning application using Django FW and Bootstrap's CSS
- Implemented budgeting feature for meal planning and eating out
- Designed and implemented database architecture for product nutrients in PostgreSQL

### Lossy & Lossless compressor

SELF PROJECT

Jan. 2019 - Sep. 2019

- Applied Huffman and LZW algorithms for lossless compression of data as well as a JPEG algorithm for lossy compression in Java
- Implemented GUI UI to observe compression ratios in Java swingX framework
- Future Direction: Implementation of picture mosaic & switching to Python Kivy FW