# 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)**                                                        *Burnaby, Canada*
B.S. IN SOFTWARE SYSTEM                                                                  *Sep. 2014 - Dec. 2018*
*Relevant Coursework:* ALGORITHMS, COMPILERS, DATA ANALYSIS, DATA STRUCTURES, EMBEDDED SYSTEMS, LINEAR ALGEBRA, MACHINE LEARNING, MULTIMEDIA, PROBABILITY THEORY, WEB INFORMATION SYSTEM

## 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 |
| **Cloud Computing** AWS | **Web** Django, HTML5, Node, JS, SCSS |

## Experience

**VDF Vertical**                                                                        *Toronto, Canada*
RESEARCH DEVELOPER [REMOTE]                                                              *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 Continues Integration for detecting build errors and cut down overall integration time
- Constructed a wood frame prototype for testing purposes and demo session

**BlackBerry QNX**                                                                      *Ottawa, Canada*
CAMERA RESEARCH                                                                          *Jan. 2017 - 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

## Latest Projects

***CHOMP***
SELF PROJECT                                                                            *Jun. 2019 - Dec. 2019*

- 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