Yernur Nursultanov

· Software Engineer ·

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"The standard library saves programmers from having to reinvent the wheel." -Bjarne Stroustrup, C++ creator

Experience

First Mile Technologies

Toronto, Canada

Full Stack Developer

Jun. 2021 - Aug.2021

- Develop and implement tools in C++ to analyze ancillary data from high-end production cameras
- Work directly with hardware vendors to integrate their HD-SDI Video Processor and capture card drivers
- Build tests and integration tooling to ensure high-quality code in an Agile environment

VDF Vertical

Toronto, Canada

Research Embedded Developer [Remote]

Sep. 2017 - Dec. 2017

- Developed a retrofit elevator hoistway sensor kit that runs on an open-source single-board computer, BeagleBone Green
- Reduced the projected cost by directly integrating existing clients' modules
- Implemented POSIX-compliant sensor libraries in C/C++ for ARM architecture which greatly increased readability and re-usability 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 Software Engineer

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 thus improving memory management.
- 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 - Diet Monitoring

- Designed and built a website that allows monitoring nutritional intake
- Working on porting the simulator to a web app using Django and Bootstrap's CSS for the frontend part
- Implemented budgeting feature for meal planning and eating out using Python
- Designed and implemented database architecture for product nutrients in PostgreSQL

ProPlanner - Choice Sorter app

- App improves users productivity by removing the component of decision making
- Developed with Golang and Gin-Gonic http framework for routing, GORM for interacting with Postges DB
- Developed frontend using NodeJs with Bootstrap's CSS
- Future Direction: Implementation of browser extension

Post Office System Simulator

- Made a Java Swing driven application that simulates post office systems
- The application usesModel View Controller design pattern to interact between the inner parts or views
- Simulator works by injecting a command, a script or an executable, that loads list of action into the system
- Worked on design a system for study of advanced scheduling techniques for delivering logistics in Pandemic environment

Education

SFU(Simon Fraser University)

B.S. in Software System

Sep. 2014 - Dec. 2018

Skills

- Algorithms
- Compilers
- Data Analysis
- Embedded Systems
- C/C++, Java, Python
- AFL-Fuzz, GDB
- Multimedia
- Probability Theory
- Web Information System