# Junaid Jawed Khan

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## Education

**2016.01 - present**

### Bachelor of Applied Sciences | Simon Fraser University, Surrey, BC

- Mechatronic Systems Engineering

## Technical Projects

**2018.03 - 2018.06**

### Power Converter Circuit Design

*Power Electronics*

- Simulated, built and tested a Buck Converter circuit to satisfy a design specification.
- Analyzed a Single-Phase and Three-Phase diode rectifier with purely resistive and inductive load.
- Examined a Single-Phase full bridge inverter’s operating principle by controlling the switching devices with a square wave and PWM input signal.

**2016.09 - 2018.04**

### Analog Circuit Design

*Electronics Engineering*

- Investigated half and full wave rectifiers to improve comprehension of how an AC source be utilized to create a DC output.
- Analyzed various BJT and MOSFET circuits to comprehend their capacities as controlled current sources.
- Soldered SMDs and through-hole components on a PCB.

**2018.09 - 2018.12**

### DC Motor Controller

*Embedded Systems Engineering*

- Investigated open-source ARM microcontroller projects to understand implementation of ADC, PWM signal and reading encoder values
- Designed circuits for fan, potentiometer and PWM output to control the speed of motor.
- Programmed TIVA-series ARM Cortex-M (TM4C123GH6PM) using online resources to read motor RPM using ADC, and implement PWM to change motor speed.

**2016.05 - 2016.06**

### Compensator Design

*Control Systems Engineering*

- Analyzed the correlation between type and steady state error of transfer function of a system.
- Examined the effect of Proportional, Derivative, and Integral controller on the response of a system.

**2016.01 - 2017.04**

### Programming

*Software Engineering*

- Designed a C++ program that accepts 2 client inputs in two’s complement, and outputs their sum in two’s complement.
- Compiled a self-written String class in C++ to understand the inbuilt library String class.
- Compiled a game in C++ that exhibited complete understanding of Object-Oriented programming.

## Engineering Skills

**Breadboard Circuit Design - Electronic and Electric Circuits**

●●●●○ Advanced

**Electronic circuit component selection**

●●●○○ Intermediate

**Exprience with Oscilloscope and Function Generator**

●●●○○ Intermediate

**Microsoft Office skills - Excel, Word, Powerpoint, Outlook**

●●●●○ Advanced

**Experience with Design Softwares - SolidWorks, LTspice**

●●●○○ Intermediate

**C++ programming skills**

●●●○○ Intermediate

**Python programming skills**

●●●○○ Intermediate

**LabView programming skills**

●●●○○ Intermediate

**Knowledge of Sensors and Actuators**

●●●○○ Intermediate

**Experience with Micrcontrollers**

●●●○○ Intermediate

**Experience with OS - Microsoft and Linux**

●●●●○ Advanced

**Soldering skIls**

●●●○○ Intermediate

2017.09 - 2017.12

### Frame Stress Analysis

*Mechanical Engineering*

- Analyzed Truss, Truss-Beam bicycle frames using concepts learnt in Statics/Strength of Materials course.
- Analyzed Truss, Truss-Beam bicycle frames exploiting Finite Element Analysis.
- Administrated documentation of the project.

2017.09 - 2017.09

### Material Selection: Turbine Fan Blade

*Material Engineering*

- Analyzed an ideal fan blade's operational conditions and objectives.
- Exploited CES-Edupack with required constraints and graphed top ideal materials for the fan blade.
- Produced complete documentation of the methodology used and the results obtained.

## Work Experience

2018.03 - present

### Tutor Doctor | Fraser Valley, Surrey, BC

*Tutor*

- Resolved high school Physics and Mathematics conceptual problems by facilitating 1-on-1 sessions.

2018.09 - present

### VolleyballBC | Barnet Hwy, Burnaby, BC

*Facility Attendant*

- Provided general information and related customer services assistance for in-person inquiries.
- Processed payments for facility admissions and facility rentals.
- Performed facility attendant duties including minor janitorial and maintenance activities as required by operational needs.

2017.09 - 2018.09

### Team Guardian | SFU Aerospace

*Software Developer*

- Compiled a bash script to download dependencies from git repository for new ground stations.
- Administrated and compiled client HTTPS file transfer between drone and ground station.

2017.06 - 2017

### Wesgar Inc. | Port Coquitlam BC

*Assembly Line Worker*

- Interpreted blueprints and assembled parts.
- Operated tools such as Rivet gun and driller

## Awards and Recognitions

**2016.06** Honors Roll Award | Fraser International College, Burnaby BC

**2014.06** Oryx Award | Sri Lankan School Muscat, Sultanate of Oman

**2018.01** NDG Linux Unhatched | Cisco Networking Academy

## Soft Skills

**Leadership**

●●●●○ Advanced

**Communication skills**

●●●●○ Advanced

**Ability to work independently**

●●●●○ Advanced

**Critical thinking**

●●●●○ Advanced

**Creativity**

●●●●○ Advanced

## Languages

**English**

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**Urdu**

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**Pashto**

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**Hindi**

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**Arabic**

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## Interests

**Documentaries**

**Fitness**

**Billiards**

**Basketball**

**Self-directed learning**

**Internet Of Things**

## References

**LinkedIn**

linkedin.com/in/junaidjawedkhan