

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 - **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 - **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 - **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 - **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.

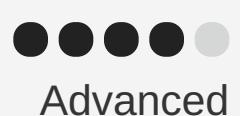
2016.01 - **Programming**

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

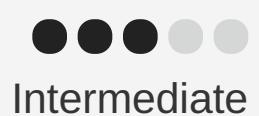
Breadboard Circuit Design - Electronic and Electric Circuits



Electronic circuit component selection



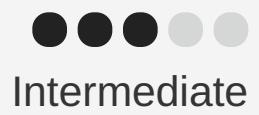
Experience with Oscilloscope and Function Generator



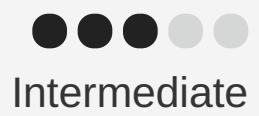
Microsoft Office skills - Excel, Word, Powerpoint, Outlook



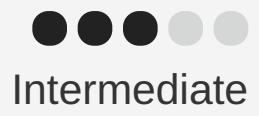
Experience with Design Softwares - SolidWorks, LTspice



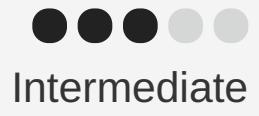
C++ programming skills



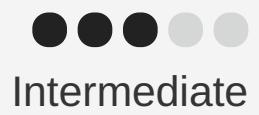
Python programming skills



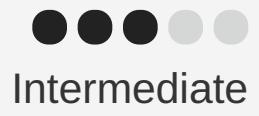
LabView programming skills



Knowledge of Sensors and Actuators



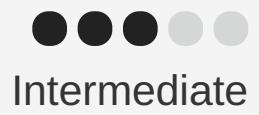
Experience with Microcontrollers



Experience with OS - Microsoft and Linux



Soldering skills



2017.09 -	Frame Stress Analysis	
2017.12	<i>Mechanical Engineering</i>	
	<ul style="list-style-type: none"> 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. Administered documentation of the project. 	
2017.09 -	Material Selection: Turbine Fan Blade	
2017.09	<i>Material Engineering</i>	
	<ul style="list-style-type: none"> 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

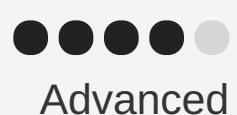
2018.03 - present	Tutor Doctor Fraser Valley, Surrey, BC	
	<i>Tutor</i>	
	<ul style="list-style-type: none"> Resolved high school Physics and Mathematics conceptual problems by facilitating 1-on-1 sessions. 	
2018.09 - present	VolleyballBC Barnet Hwy, Burnaby, BC	
	<i>Facility Attendant</i>	
	<ul style="list-style-type: none"> 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	
	<i>Software Developer</i>	
	<ul style="list-style-type: none"> Compiled a bash script to download dependencies from git repository for new ground stations. Administered and compiled client HTTPS file transfer between drone and ground station. 	
2017.06 - 2017	Wesgar Inc. Port Coquitlam BC	
	<i>Assembly Line Worker</i>	
	<ul style="list-style-type: none"> 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



Urdu



Pashto



Hindi



Arabic



Interests

Documentaries

Fitness

Billiards

Basketball

Self-directed learning

Internet Of Things

References

LinkedIn

[linkedin.com/in/junaidjawedkhan](https://www.linkedin.com/in/junaidjawedkhan)