

Nishkal Kashyap

hello@nishkal.in
nishkal.in
github.com/nishkalkashyap
linkedin.com/in/nishkalkashyap

Mechanical Engineer and full-stack developer. Creator of JavaScript platform [QuarkJS.io](https://quarkjs.io)
Perusing multi-disciplinary engineering and entrepreneurship. Visit my portfolio website at: nishkal.in

Experience

Quark

July 2018 - Present

My first entrepreneurial undertaking [QuarkJS.io](https://quarkjs.io), a full fledged application development and distribution platform for Windows, Mac and Linux based operating systems. Since it's public announcement in August 2019, the project website has been viewed over 125,000 times and the Quark software itself has been downloaded by over 10,000 developers around the world.

Team Defianz Racing

February 2015 - July 2018

Participated in 4 Formula Student events held in India and the United Kingdom across 4 years. As Chief Engineer, led the team to its best positions till date at both FS Bharat (2nd overall) and FS United Kingdom. Previously worked as the head of the Powertrain and Electronics department.

Universal Industries

Dec 2015

Worked as an intern with the design department of Universal Industries, which is a renowned manufacturer of a wide range of mechanical power transmission products.

Education

Delhi Technological University

Aug 2014 - Jun 2018

B. Tech, Mechanical Engineering • 70.4%

Shivalik Public School

Mar 2012 - May 2014

CBSE • 94.6%

Projects

Tech Stack: Electron.js • Angular 7 • Node.js • Webpack

Quark development environment

2018 - Present

Developed a cross-platform, integrated development environment powered by the same code editor as of **Microsoft's Visual Studio Code (VSCode)**. The IDE boasts of novel features like integrated terminal, inbuilt package manager and more that 150 different configuration settings. Visit quarkjs.io

Tech Stack: Arduino • Nextion HMI display • Carbon fiber • Pneumatics

Electronic steering wheel

February 2017

Developed a carbon fiber reinforced, touch screen enabled electronic steering wheel. Built with Arduino and Nextion HMI display, the steering wheel served as the central command center for a formula student vehicle.

Tech Stack: Firebase Firestore • Ionic 3 • Angular 4

Finance Management App

August 2017

Developed a finance management app for the team. The app was built using Ionic 3, Angular 4 at the frontend and Firebase Firestore at the backend and was used in production from Aug 2017-July 2018

Solidworks • Engineering Design • Optimization

Dynamometer

Oct 2017 - Jan 2018

The aim of this project was to acquire, analyse and apply the output characteristics of the engine in further optimizations and calculations like engine performance, intake-exhaust simulations, fuel consumption calculations, etc

Tech Stack: React.js • Firebase • Firestore Database • Cloud Functions

Quark app store

July 2019 - Present

Currently under active development, the appstore is a full-fledged application distribution platform for Quark apps. It supports novel features like release versioning, application auto updates, register user ratings e.t.c Visit dash.quarkjs.io

Tech Stack: Arduino • Processing

Data acquisition system

March 2017

Developed a data acquisition system, supporting more than 20 different sensor inputs. The data is sent in real time via a radio transmitter mounted on the car and received on the client side via a receiver connected to a laptop.

Solidworks • Research Paper • Thesis

Variable geometry intake manifold

Aug 2016 - May 2018

Developed a variable geometry intake manifold. This system massively improved the overall engine performance, mainly throttle response in the bottom end of the RPM range.

Solidworks • Engineering Design • 3D Printing

Design and manufacturing of various powertrain subsystems

Mar 2015 - Jan 2016

Developed various sub-systems of vehicle, including an air-intake manifold, exhaust manifold, oil sump and radiator for a 4-cylinder IC Engine.

Competitions and Achievements

Competition • India • Coimbatore • Kari Motor Speedway

Formula Student Bharat

January 2018

Participated in the Formula Student Bharat competition and led a team of 30 to an overall **Second position**. Responsible for the design and development of the combustion powertrain, systems integration and electronics of the vehicle.

Competition • United Kingdom • Silverstone Formula 1 Circuit

Formula Student UK

July 2016

Participated in the Formula Student UK competition held at the Silverstone Formula 1 racing circuit.

Competition • United Kingdom • Silverstone Formula 1 Circuit

Formula Student UK

July 2017

Participated in the Formula Student UK competition held at the Silverstone Formula 1 racing circuit. Secured the best ever overall position by the team.

Competition • India • Buddha International Circuit

Formula Student India

January 2016

Participated in the Formula Student India competition held at the Buddha International Circuit.

Skills

Programming Languages	JavaScript, TypeScript
Frontend technologies	Electron.js, Angular 2+, Vue.js, React.js, SCSS/CSS, Babel, Webpack
Backend technologies	Node.js, Express.js, Cloud Functions, App Engine, heroku
Databases	Firebase Database, Firebase Firestore
DevOps	Travis CI and Appveyor CI
Electronics & MCU's	Arduino based boards, Node MCU, ESP, Nextion HMI display, OBD-2 (ELM-327)