

Nishkal Kashyap

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

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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. Released 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. This project is also a beneficiary of the Google Cloud Startup Program!

Team Defianz Racing

February 2015 - July 2018

Participated in 4 Formula Student events held in India and the United Kingdom across 4 years. Led a team of 25 student engineers 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. Developed CAD models for pulleys and sprockets on SolidWorks. Studied the Quality Control processes implemented by the company.

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 features like integrated terminal, inbuilt package manager and more that 150 different configuration settings. Visit quarkjs.io

Tech Stack: Firebase Firestore • Ionic 3 • Angular 4

Finance Management App

August 2017

Developed a finance management app using Ionic 3, Angular 4 at the frontend and Firebase Firestore at the backend. The app was used by a team of 25 student engineers from Aug 2017 - Jul 2018, to manage internal finances of the team.

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.

Solidworks • Engineering Design • 3D Printing

Design and manufacturing of various powertrain subsystems

Mar 2015 - Jan 2016

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

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

Implemented a data acquisition system using Arduino, 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 performance of an IC engine, mainly throttle response at the bottom end of the RPM range.

Competitions and Achievements

Competition • India • Coimbatore • Kari Motor Speedway

Formula Student Bharat

Jan 2018, Team Defianz Racing

Led a team of 25 student engineers to an overall **second position** in the Formula Student Bharat competition. Responsible for systems integration and team management.

Competition • United Kingdom • Silverstone Formula 1 Circuit

Formula Student UK

July 2016, Team Defianz Racing

Participated in the Formula Student UK competition held at the Silverstone Formula 1 track as a powertrain engineer.

Competition • United Kingdom • Silverstone Formula 1 Circuit

Formula Student UK

July 2017, Team Defianz Racing

Participated in the Formula Student UK competition held at the Silverstone Formula 1 track. Responsible for the development of the combustion powertrain and electronics of the vehicle.

Competition • India • Buddha International Circuit

Formula Student India

Jan 2016, Team Defianz Racing

Participated in the Formula Student India competition held at the Buddha International Circuit as a junior powertrain engineer.

Skills

Programming Languages	JavaScript, TypeScript
Frontend technologies	Electron.js, Angular 2+, Vue.js, React.js, Babel, Webpack, SCSS/CSS, HTML
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)
Core Engineering	Solidworks, IC Engines, Automobile electronics, Manufacturing processes

Learn more about me on my website nishkal.in