

# Bava Kesavan

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**Mission Statement:** With over four years of engineering experience and an aptitude for innovation and research, I aspire to understand technical concepts in tissue engineering and develop solutions to meet modern medicine's ever-changing needs.

## Education

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### Bachelor of Mechatronics Engineering Co-op

Class of 2019

McMaster University, Hamilton, Ontario

## Work Experience

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### Intermediate Software Engineer | Evertz Microsystems Ltd. | Burlington, ON 06/2019 – Current

- Solve complex problems with the engineering team while ensuring the system is scalable, secure and performant
- Helped design and develop microservice using JS to populate the UI with thumbnails in milliseconds
- Developed services and APIs using Python, Java, and Angular

### Project Engineer | Evertz Microsystems Ltd. | Burlington, ON 05/2017 – 08/2018

- Led proof-of-concept design that resulted in the purchase of the production-ready product worth over \$500k
- Performed thorough analyses of system architectures to design and resolve workflow issues
- Managed end-to-end tests and reduced production level failures from 40% to under 5%
- Provided innovative media asset management solutions using JavaScript, SQL, XML, and Shell scripts

### Ecommerce Intern | Cardinal Health Canada | Vaughan, ON 05/2016 – 08/2016

- Awarded the Spotlight award for automating data verification with Java, increasing the efficiency by 200%
- Developed and implemented algorithms for product database using VBA
- Improved data quality for the B2B platform by collaborating with Product Managers
- Conducted usability studies and implemented design changes to the B2B platform

## Projects

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### DROP | Capstone project | McMaster University

09/2018 – 07/2019

*Drop is a solution to the time-consuming operation of filling blister packs at pharmacies. This device fills each blister pack with the required medications as indicated in the prescription with no supervision.*

- Designed and implemented the control system with an Arduino, Raspberry Pi, switches, and sensors to precisely control and dispense medication
- Developed technical workflow, state diagrams, and test cases for the user

### **Push Pull Legs | Android Play Store**

10/2017 – 11/2018

*Push Pull Legs is a product of my Android development exploration. It is a mobile application created for fitness enthusiasts to help meet their exercise goals and motivate them to go further.*

- Achieved over 20,000 downloads and a 4.3 rating from more than 100 users
- Designed and developed using Java, XML, and SQL with an easy-to-use user interface for all audiences

### **Meet Meat | HackPrinceton Spring 2017 | Princeton University**

03/2017

*Developed a web app where users can search through menus of restaurants in their area for specific food they wish to eat.*

- Developed web app using AngularJs and hosted on AWS
- Used Google's Place to find restaurants in the desired vicinity and Yelp to parse through local menus

### **Pacemaker | McMaster University**

11/2016 – 12/2016

*Designed a prototype pacemaker that regulates a patient's heart rate who have a bradycardia condition.*

- Developed a device provides that can monitor and regulate a bradycardia patient's heart
- Using the FRDM-K64F Board, the system can acquire and show multi-channel monitoring, including surface electrocardiogram and telemetered signals

## **Extra-Curricular/ Volunteer Activities**

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### **ICC+ | St Joseph's Healthcare | Hamilton, ON**

11/2018 – 04/2019

- Won the Innovation Sprint Competition for creating an integrated health system and human resources solution to tackle caregiver burnouts
- Designed the ICC+ pilot project with new roles within the health system to reduce the load on employees
- Developed a web-based platform for stakeholders to access and take advantage of available services

### **Communication Assessor | Pharmacy Coach Inc, | Vaughan, ON**

1/2019 – 03/2019

- Assessed international pharmacy graduates in clinical communication through scenario-based verbal and visual tests for the Canadian licensing exams

### **Mechanical member | ARVI (Autonomous Robotic & Vehicle Improvement)**

11/2018 – 03/2019

- Designed and prototyped chassis, bearing braces, and sensor mounts for AGVs
- Reviewed CAD designs and ensure integration of the electrical components
- Sourced materials and parts for the mechanical team

### **Judging**

#### **National Design League | National Designathon 2021**

05/2021

- Evaluated engineering solution to a real-world challenge
- Assessed 3D modelled design for functionally, feasibility, safe and maintenance

#### **Vex Robotics**

12/2017

- Judged 31 elementary and high school teams across the province during the matches
- Ensured teams satisfied all prerequisites before the tournament