

# Kowshik Islam

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📍 Toronto, Canada

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## Languages and Technologies

### Languages & Frameworks

JavaScript, Node.js, Python, C#, TypeScript, Java, Express, React, SQL, HTML, CSS, Storybook

### Cloud Technologies

AWS CDK, ECS, EC2, Fargate, IAM, EFS, VPC, Lambda, CloudWatch, Cloud Map

### Other Technologies

PostgreSQL, MongoDB, SQLite, Git, Docker, RESTful APIs, Nginx, RabbitMQ, Elasticsearch, Kibana

## Experience

**Mechanical Engineer, OFGO Studio**

02-2019 – Present | Vaughn, Canada

### AutoProcessor Project

Transformed the design and product manufacturing process by designing a holistic software solution that translates customer orders into actionable tasks, resulting in precise, error-free production.

- Created a Task Creator that interprets customer orders, converting each product order into 3-4 tasks based on specific customer preferences.
- Optimized task allocation and efficiency by architecting a **Distributed Task Scheduler System** incorporating a Task Creator, relational database, and messaging queue, leading to effective parallelization across multiple worker nodes.
- Enhanced system reliability by integrating robust logging using Elasticsearch and Kibana, leading to prompt issue detection and resolution.
- **Tech Stack:** VB.NET, C#, Elasticsearch, Kibana, RabbitMQ, Microsoft SQL Server Management Studio

### Other Projects

- Create a drag-and-drop product design interface using a Low-Code tool, resulting in reduced design errors, shortened design time, and enhanced output quality.
- Developed a Python (NumPy, Pandas) application to transform 100,000+ rows of data, dramatically reducing manual data entry efforts for ERP integration.

**Software Engineer, Co-Creator, Herald** 📄

01-2023 – 09-2023 | Remote

Herald is an open-source observability solution created to bridge the gap for a freely accessible, easily deployable, scalable, and robust monitoring tool for distributed applications. Leveraging the power of the ELK Stack (Elasticsearch, Logstash, and Kibana), Herald delivers scalability and efficiency, adeptly handling multi-cluster environments to meet escalating application performance monitoring needs.

- Streamlined deployment and tear-down of a complex application into a few steps using **AWS CDK** and **CLI**, achieving a 99% reduction in setup effort and enhancing user experience.
- Architected a **microservice** structure using AWS CDK, resulting in a scalable, flexible foundation for cloud components.
- Designed an autoscaling Elasticsearch service using the **ECS autoscaling** feature, ensuring continuous data ingestion and indexing during peak loads.
- Implemented automated **TLS encryption** across all services using AWS Lambda, EFS, and custom docker image, bolstering security across Herald's services.
- Resolved configuration challenges by crafting **Docker** images and containers, improving deployment flexibility.
- Authored a detailed case study, providing valuable developmental insights to the community (<https://herald-app.github.io>) 📄.
- Collaborated with a **global team** across three time zones using **agile methodologies**, ensuring synchronized development and product consistency.
- **Tech Stack:** JavaScript, Elasticsearch, Logstash, Kibana, Fleet Server, AWS CDK, ECS, EC2, Fargate, IAM, EFS, VPC, Lambda, CloudWatch, Cloud Map

## Software Engineering Projects

- Panicbin: A real-time tool for receiving and monitoring webhooks (Express.js, Material UI, MongoDB, Nginx, Node.js, PM2, PostgreSQL, React).
- SwiftTrolley: Node.js, Express, MongoDB, and React-based e-commerce app.

## Education

**BEng Mechanical Engineering, Toronto Metropolitan University** 📄

2011 – 2016 | Toronto, Canada