

Banin Abrar

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🐙 [github/babrar](https://github.com/babrar)

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WORK EXPERIENCE

JANA Corporation

Aurora, ON

Software Development Intern

Sep 2018 - Dec 2018

- Constructed data pipelines from csv using Pandas DataFrames to achieve an application-wide data abstraction layer, vastly improving reusability of data segments and data throughput between modules.
- Added smart visualization features to existing data analysis tool using React components in Dash.
- Reduced asset load time from Postgres by **90%** by significantly redesigning core schemas and queries.

Integrated Device Technology (IDT) Inc.

Waterloo, ON

Software Engineering Intern

Jan 2018 - Apr 2018

- Introduced Intel's 256-bit AVX instruction set extensions to pre-processing stage of H.265 video encoder, allowing for wider memory operations and accelerating RGB data retrieval rate from pixels by **75%**.
- Architected register pipeline designs on H.264 FGPA in Verilog, cutting down on negative slack by **30%**.
- Setup CI/CD builds and automated the upload, replace, publish and reload process in Bamboo.

OTHER EXPERIENCE

University of Waterloo Management Consulting Club

Waterloo, ON

Web Development Team

Feb 2019 - Present

- Migrating from a static web portal to a dynamic website with interactive, responsive components by using React with a Docker-containerized backend application running on Ruby on Rails and MySQL.

PROJECTS

HikePal | Dynamic Web Application

🐙 git.io/fhK8p

- RESTful content sharing platform with built-in content management system created using MongoDB, Bootstrap, Express.js and Node.js that allows users to find suitable hiking trails near them by browsing geotagged hiking trails uploaded by other users of the platform.

GeekCane | Embedded, Data Analysis, IOT

🐙 git.io/fh55q

- IOT device that aids vision-impaired people to navigate clear of incoming or static obstacles. Object detection carried out using Ultrasound signal probing with an Onion Omega for processing sensor data.

SKILLS

- **Development:** Python, JavaScript, Perl, C++, C, Bash, Rust, Node.js, Flask, CSS, Bootstrap, React
- **Infrastructure:** AWS (EC2, S3), GCP, Nginx, Docker, Kubernetes, Git, Jira, Travis CI, Bamboo
- **Data:** SQL, MongoDB, PostgreSQL, Pandas, Numpy, Google Analytics

EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Applied Science in Computer Engineering

Sep 2017 - Apr 2022 (Expected)

Honors: President's Scholarship of Distinction (95% admission average)

Coursework: Algorithms and Data Structures, Containerization, Web Application Development

INTERESTS

- **Interests:** Distributed Systems, Infrastructure, Web Development, Modelling and Data Engineering