

# BANIN ABRAR

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## SUMMARY

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- Python (NLP, Pandas, Flask), JavaScript (Node.js, React, Express), C++, Perl, SQL, Bash
- MongoDB, Postgres, Hadoop, Presto, Hive, Docker, Git, Jenkins, OpenSSL, RESTful services

## EXPERIENCE

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### **FLIR Systems Inc. (Aeryon Labs)**

*May – Aug '19*

*Data Tools Intern*

*Waterloo, ON*

- Architected a read-optimized data warehouse solution to address rapidly evolving schemas and to unify data tooling across all engineering teams.
- Created a PrestoSQL-on-Hive configuration to achieve **80% - 100%** lower latency on read times from data warehouse compared to HiveQL.
- Added Redash to data pipeline allowing for generation of quick data visualization on queried data.
- Secured hadoop services by adding perimeter security and setup single-sign-on for data services.

### **JANA Solutions**

*Sept – Dec '18*

*Software Development Intern*

*Aurora, ON*

- Built a data analytics backend in Python for the company's core probabilistic modelling software.
- Refactored core schemas and improved company-wide asset data retrieval time by **200%** in Postgres.
- Added smart visualization features to existing data analysis tool using React components in Dash.

### **Integrated Device Technology, Inc. (IDT)**

*Jan – Apr '18*

*Algorithm Engineering Intern*

*Waterloo, ON*

- Implemented Intel's 256-bit AVX instructions in pre-processing stage of H.265 encoder, allowing for wider memory operations and accelerating RGB data retrieval rate from pixels by **75%**.
- Built register pipeline designs on H.264 FGPA in Verilog, that reduced negative slack by **30%**.

## OTHER EXPERIENCE

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### **UWaterloo Midnight Sun - Solar Race Car**

*General Strategy Team*

- Researched non-linear optimization problems pertinent to the application of solar cells modules on a race car prototype and successfully modelled approximate solutions in Python.

## PROJECTS

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### **Bz-torrent**

- A lightweight web-based BitTorrent client in Node.js (with UDP trackers) for P2P file transfers.

## EDUCATION

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### **University of Waterloo**

*Sept '17 – Apr '22 (expected)*

*Candidate for Honours Bachelor of Applied Science in Computer Engineering*

- President's Scholarship of Distinction for having more than 95% admission average.
- Relevant Coursework : Algorithms and Data Structures, Digital Circuits and Systems, Embedded Systems Design, Object Oriented Programming, Web Development