Banin Abrar

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Summary

- 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

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

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

Bz-torrent

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

Education

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