Banin Abrar

babrar@uwaterloo.ca — in/baninabrar — github.com/babrar

Summary

· Python, NodeJS, C++, SQL, React, Perl; AWS, Heroku, Nginx, MongoDB, PostgreSQL
· Experience with systems design, application deployment, backend development, optimization

Experience

JANA Solutions *Aurora, ON*
Software Development Intern (Model/Infrastructure) Sep – Dec '18

· Led software implementation of JANA's probabilistic model for distributed gas transmission lines
· Redesigned asset storage and hashing in PostgreSQL to improve system throughput by 90.32%
· Deployed Dash integrated Flask application to internal servers using Apache as reverse-proxy
· Authored an internal knowledge base scraper to extract relevant data from user-defined queries
· Built custom git development environment tools and automated update integration into web app

Integrated Device Technology (IDT) *Waterloo, ON*
Software Engineering Intern (Performance) Jan – Apr '18

· Improved proprietary H.265 compression's load distribution across multiple compute cores
· Increased pixel metadata retrieval rate by 75.81% over open-source implementation in x265
· Optimized pipeline designs in H.264's FPGA using Verilog. Reduced total negative slack by 30%
· Wrote client-side scripts to improve SSH compatibility in the company's internal git workflow

UW Management Consulting Club *Waterloo, ON*
Web Developer Jan'19 – Present

· Currently designing a cross-platform responsive website enlisting Ruby on Rails and eRuby

Projects

YelpCamp *git.io/fhG5W*
Node.js, MongoDB, EJS

· Building a Heroku-hosted Node.js application to serve an interactive collection of campsites
· Utilized Passport.js to implement authentication and MongoDB to achieve lightweight storage

UltraInstinct *git.io/f4dhQ*
Flask, Jinja2

· Designed a Twitter-API based Flask application that analyzes users based on their twitter activity
· Utilized IBM Watson's natural language processing API, to perform tweet sentiment analysis

Smart-Cane *git.io/f4d9G*
C, C++, MIPS

· Led an embedded systems project, for designing a smart walking-aid for the vision-impaired
· Implemented a proximity-based warning system through ultrasonic signal probing in Omega-2

Education

University of Waterloo Sept '17 – Apr '22 *(expected)*
Candidate for Honours Bachelor of Applied Science in Computer Engineering

· President's Scholarship of Distinction (2017)

Relevant Coursework

· Algorithms and Data Structures, Full Stack Web Development in Node.js, Digital Computers, React Native Application Development, Fundamentals of Programming, Discrete Math and Logic