

EMAD AHMED

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SKILLS

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|--------------------|---|
| PROGRAMMING | Python, Java, C++, JavaScript, SQL |
| TOOLS | Git, Heroku, AWS S3, Npm, Linux, Ubuntu, GDB, BeautifulSoup, pandas |
| FRAMEWORKS | Django, Node.js, Express, React, FFmpeg, Qt, MongoDB, Hibernate |

EXPERIENCE

Software Design Engineer - Evertz Microsystems - Fall 2016

- Built preview functionality of the Evertz FilePlayer (customized video player for digital replay) from scratch allowing users to seek to certain points in a large file using **FFmpeg libraries, C++ and Qt**
- Optimized FilePlayer by using database only when the user seeks to a point in the video, reducing database usage by **20%**
- Integrated FilePlayer into production by implementing JSON RPC messages to allow compatibility with back-end APIs
- Revamped logging architecture to detect and optimize workflows that are slowing system performance

Software Engineer - TVR Communications - Winter 2016

- Reduced load time and database usage of Channel Lineup page by **50%** through efficient querying and caching using **Java, Hibernate and SQL Server**
- Implemented new sorting feature to order TV channels based on hospital location and advertising preferences
- Added cloning feature for TV Channels across multiple hospitals, resulting in **25%** less time to deploy new builds
- Built admin dashboard from scratch including back-end API to produce SQL scripts about hardware for new builds

PROJECTS

FadeawayHoops.com - Python, Django, PostgreSQL, Heroku, AWS S3

Oct 2016

- NBA Website with a focus on Statistics and **Machine Learning** to predict outcomes for the season
- Implemented web-scraping functionality using **BeautifulSoup** to display real-time data such as standings, stats and news

BlazeSMS - Node.js, MongoDB, Twilio API

Oct 2016

- Patient management service which schedules and manages Doctor's appointments via text message
- Created custom **scheduling algorithm** to detect conflicts with appointment requests and recommends alternate timings

BoardScribe - Python, Clarifai, Tesseract, Django

Nov 2016

- Online educational platform with **image recognition**, enabling students to transcribe pictures of notes
- Implemented Clarifai API with Tesseract.js to classify letters and train the model for optical character recognition
- Built web app using Python, Django and PostgreSQL with features such as student login authentication and sharing of notes

EDUCATION

University of Waterloo

Candidate for BAsC Systems Design Engineering (2020)

Relevant Courses: Data Structures and Algorithms (Python) , Digital Systems (Arduino), Human Factors Engineering (UI/UX)

INTERESTS

- Hackathons, NBA, Working Out, Podcasts, Sports Media, Biology, Machine Learning