EMAD AHMED

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Skills

Programming: Python, Java, C++, JavaScript, HTML/CSS, Android
Tools: Sublime/Atom, Git, Heroku, Npm, Linux, Ubuntu
Libraries/Frameworks: Django, Node.js, Qt, FFmpeg, BeautifulSoup, PostgreSQL, React, MongoDB

Experience

Software Design Engineer - Evertz Microsystems **-** Fall 2016
• Built preview functionality to the Evertz FilePlayer (customized video player for digital replay) by allowing users to seek to a point in a large file and play from that point using **FFmpeg libraries, C++ and Qt**
• Integrated FilePlayer into production environment by implementing JSON RPC messages to allow communication with FilePlayer and different back-end APIs
• Optimized efficiency of FilePlayer by using database when the user seeks to a specific point in the video, therefore reducing the initial load on the database

Software Engineer - TVR Communications **-** Winter 2016
• Reduced load time and database usage of the Channel Lineup page by 50% through efficient database querying and caching with **Java** and **Hibernate ORM**
• Independently developed new module for TV product that allows deployment staff to release **SQL scripts** with metadata about hardware for new builds
• Added new sorting feature for channel lineup that orders channels by user preference based on hospital location and advertisers

Projects

BoardScribe   Nov 2016
• Created online learning platform that allows students to take pictures of school notes and transforms them into text
• Implemented Clarifai API with Tesseract.js to classify each letter in a picture and train the model for image recognition
• Built web application with **Python, Django and PostgreSQL** with features such as student login and sharing notes

FadeawayHoops   Oct 2016
• Developed and designed NBA Website with a focus on Statistics and **Machine Learning** to predict outcomes for the season
• Created with **Python**, **Django** and **PostgreSQL** in the backend and deployed using **Heroku** and **AWS S3**
• Implemented web-scraping functionality by using Python's **BeautifulSoup** library to display changing data such as
NBA standings, stats and news

BlazeSMS   Oct 2016
• Built patient management service where patients schedule Doctor's appointments via text message and administrators can view upcoming appointments
• Built with **Node.js, MongoDB** and the **Twilio API** for handling incoming text messages from patients and replying based on the outcome of the appointment request
• Created custom scheduling algorithm that detects conflicts with appointment requests and recommends alternate timings to patients

Education

BASc in Systems Design Engineering , University of Waterloo
Relevant Courses: Data Structures and Algorithms, Digital Systems (Arduino), Human Factors Engineering (UI/UX)

Interests

• Hackathons, NBA, Working Out, Podcasts, Sports Media, Biology, Product Design, Machine Learning