Emad Ahmed

2A Systems Design Engineering student

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Skills

- **Programming** / Python, Java, C++, JavaScript, SQL
- **Web Development** / Django, Node.js, Express, React, MongoDB, HTML, CSS
- **Tools** / Git, Heroku, AWS S3, Npm, Ubuntu, GDB, BeautifulSoup, pandas, FFmpeg, Qt

Experience

Fall 2016 **Software Design Engineer**, <u>Evertz Microsystems</u>
- Built preview functionality of the Evertz FilePlayer (video player for digital replay) from scratch using C++, Qt and FFmpeg
- Optimized FilePlayer by using database only when the user seeks to a point in the video, reducing bandwidth usage by 20%
- Revamped logging architecture to detect/optimize workflows that are slowing system performance

Winter 2016 **Software Engineer**, <u>TVR Communications</u>
- Reduced load time and database usage of Channel Lineup page by 50% through efficient querying and caching
- Implemented new sorting feature to order TV channels based on location and consumer demographics
- 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, scikit-learn, Heroku, AWS S3*
- NBA Website with a focus on Statistics and Machine Learning to predict key stats 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*
- Patient management service which schedules and manages Doctor's appointments via text message
- Created custom scheduling algorithm to detect conflicts with appointment requests and recommend alternate timings

BoardScribe – *Python, Clarifai, Tesseract, Django*
- Online educational platform enabling students to transcribe pictures of notes via image recognition
- Built web app using Python, Django and PostgreSQL with features like student login, authentication and sharing of notes

Education

2020 **BASc in Systems Design Engineering**, *University of Waterloo*
- Relevant Courses: Data Structures and Algorithms (Python/Java), Digital Systems (Arduino)

Interests

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