

# 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, Npm, Ubuntu, Heroku, AWS S3, GDB, BeautifulSoup, pandas, FFmpeg, Qt

## Experience

Fall 2016 **Software Design Engineer**, Evertz Microsystems

- Built preview feature of the Evertz FilePlayer (video player for digital replay) from scratch
- Optimized FilePlayer by using database only when users seek in a video, reducing bandwidth usage by 20%
- Integrated FilePlayer via JSON RPC to allow for compatibility with back-end APIs
- Revamped logging architecture to optimize workflows that slow performance

Winter 2016 **Software Engineer**, TVR Communications

- Reduced load time and database usage of Channel Lineup page by 50% through efficient querying and caching
- Implemented sorting feature to order channels based on consumer demographics
- Added cloning feature for channels across locations, reducing time to deploy new builds
- Built admin dashboard from scratch including back-end API to produce SQL scripts

## Projects

**FadeawayHoops.com** – Python, Django, PostgreSQL, scikit-learn, Heroku, AWS S3

[bit.ly/2n0noNX](https://bit.ly/2n0noNX)

- NBA Website with a focus on Statistics and Machine Learning
- Used K-Nearest Neighbors algorithm to predict points per game averages for NBA players
- Implemented web-scraping functionality using BeautifulSoup to display real-time data such as standings, stats and news

**BlazeSMS** – Node.js, MongoDB, Twilio API

[git.io/vyWhU](https://git.io/vyWhU)

- Patient management service which schedules Doctor's appointments via text message
- Created custom scheduling algorithm to detect conflicts with appointment requests

**BoardScribe** – Python, Clarifai, Tesseract, Django

[git.io/vyWhn](https://git.io/vyWhn)

- Online educational platform enabling students to transcribe pictures of notes via image recognition
- Implemented Tesseract.js with Clarifai API to identify letters and train model for OCR
- 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*

- Data Structures and Algorithms (Java/Python)
- Introduction to Programming (C++)

## Interests

- Tech, Basketball, Working Out, Data Science, AI, Podcasts, Sports Media, Biology