John Mikhail

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Education	**Carnegie Mellon University**	May'16

B.Sc. Computer Science
Minor in Robotics

Work Experience

Freelancer on Upwork — Sep'18 - **Present**

- Built a reservation system for a client for his summer houses. Built adaptive calendar pop-up where it only allowed selecting available dates.
- Used CSS grid layout to build multiple responsive web pages
  https://www.upwork.com/freelancers/~0141546830598e9ae7

Kiddy (startup) — Nov'17 - **Present**

Co-founder and CTO of Kiddy; an application being developed using **React Native** and **RoR** to help parents keep track of their kids in class and their school/nursery activities. Working with a school closely to better build the product with their needs in mind, which is reflected in the design of the db and application.

Enlisted for military service — Jul'17 - Sep'18

Software Developer at Inpleo — Feb'17 - Jul'17

- As a first employee, helped building Inpleo app - a reverse auction platform using **RoR.** Improved the system architecture by refactoring code, redesigning the database for multi-tenancy and working on the app's backend and frontend for a better performance through pagination and reduced calls while making sure it did not regress through testing.
- Improved user experience by faster loading and better designs.

Internship at Inpleo (Startup) — Summer'15

Developed an interactive analytics dashboard for a business intelligence engine to model transaction data at Inpleo. The dashboard is built using **dc.js** and is comprised of charts based on Inpleo's aggregated data.

Research

Hala - Bilingual Robot receptionist (CMU-Q) — Fall'12 - Spring'13

- Improved the knowledge-base of Hala in English and Arabic
- Wrote a **Python** script to find patterns in Hala's logs, extracts the important data and inserts them in a database
- Built an online dashboard that extracts data from the database as required and plot different charts using **Highcharts**
- Presented research findings at Meeting of the Minds, an annual research symposium:
  https://issuu.com/carnegiemellonqatar/docs/mom_digest_2013_print/26

Extracurricular Activities and Achievements

DesktopFlush (open source) — Oct'16 - Jan'17

Desktop organizing tool built using Electron to help organize users' desktop by creating mini windows each with its title and contains set of folders for easy access.
https://github.com/ngopee/desktopFlush

Roomie - Carnegieapps — Fall'16
(Team of 4 - hackathon)

Roomie helps users to find an apartment to sublet with other people based on their preferences. With its ranking algorithm, it provides the best apartments based on your work location, budget, number of rooms and number of roommates.

Extracurricular Activities and Achievements

Pittsburgh Codefest
Spring'15
(Team of 5 - hackathon)

Developed an application for students using **Python** that extracts information from syllabi and automatically exports it to user's google calendar to remind them of their assignments and exams.

Programming Contests
Spring'14
(Team of 3)

- Gulf Programming Contest (4th place)
- Qatar Collegiate Programming Contest (1st place)
- Oman Collegiate Programming Contest (2nd place)

Class Projects

3D-Chat (Web-app development)
Spring'16
(Team of 3)

- Designed and built a chatting application with its database using **Django** and sqlite. For chatting, **Peer.js** was used with a 3D face (**WebGL** and **Three.js**) with various facial actions like user's face tracking to improve the chatting experience. **Google web speech** was used to synthesize the sent text

- Live translation (**Yadenx API**) translates the sent text to the other user, French and English are already built in the application, with other languages easily added

- The application was tested with various French and English native and fluent speakers to build the best possible interaction

  (https://github.com/jnaguib/ThreeD-Chat)

Fingers-controlled robot car (Embedded Systems)
Spring'14
(Team of 2)

Built a system using **C** to control a robot car wirelessly by bending different fingers using flex sensors and Xbee.

Hala-See Hala-Do (Perceptual Computing class)
Fall'13
(Team of 3)

Used Intel Perceptual computing SDK in **C++** and creative camera to create a robot that is able to answer questions using voice commands and responds to facial expressions such as smiling and nodding.

Sentiment Analysis for Twitter Data (Text Processing)
Fall'13

Wrote **Python** scripts that analyze tweets being positive, negative or neutral using Naive Bayes and libSVM. The code, with the set of features being used and the test results can be found at:
(https://github.com/jnaguib/Twitter-Sentiment-Analysis-Intro-to-Text-Processing-)

Video CDN (Networking)
Spring'16
(Team of 2)

We implemented adaptive bitrate selection and DNS load balancing and some parts of OSPF for a video content distribution network. After measuring the time it took to send a chunk of the video, we adaptively send the other chunks (higher or lower bitrate based on the connection)

Technical Skills

Python	★★★★☆	HTML	★★★★☆	
Java	★★★☆☆	CSS	★★★★☆	
C	★★★★☆	JavaScript	★★★★☆	
Node.js	★★★☆☆	RoR	★★★★☆	

Languages

English	★★★★★
Arabic	★★★★★