

# MAISSOUN KSARA

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## SUMMARY

I am a structural and process mechanical engineer turned software developer with a passion for programming innovative solutions to everyday problems. My love for technology, design and creation urged me to switch paths and focus on growing my career as a programmer. My unique background in structural & process engineering along with my technical acumen, strong critical thinking and communication skills allow me to bring a uniquely well-rounded perspective to the table. As a trilingual engineer with a diverse technical skillset, I thrive in collaborative environments among multidisciplinary teams. I am currently looking for software development opportunities where I can continue to enhance and strengthen my development skills.

## EDUCATION

**Drexel University**, Pennsylvania

Graduated 2018

Bachelor of Science in Civil Engineering & Master of Science in Structural Engineering

GPA: 3.80/4.00

**Relevant Coursework:** Data Structures & Algorithms (online courses), Linear Algebra, Dynamics, Engineering Data Analysis, Advanced Structural Analysis, Mechanics of Materials

## PROJECTS

### Augmented Speech-reader and Bluetooth module – Winner evoHax Hackathon

- A portable voice recognition device augmented with Bluetooth that converts speech to text to desktop and web commands
- Written in C++ and Python to interface with the free, open source, text to speech reader Non-visual Desktop Access (NVDA) to enable two way, hands free, audio communication between the user and various functions on their computer from opening an application to selectively reading a web page
- The automation of searching commands like control + F to find relevant content eliminates any need for manual keyboard and mouse input

### SWEShare – 2<sup>nd</sup> Place UPenn FemmeHacks Hackathon

- An application aimed to help Drexel's Society of Women Engineers organize its schedule and tasks. Written in Python using Django Framework. Includes scripts in JavaScript & marked up in HTML/CSS.
- The application enabled SWE members to post their goals and get matched with other members or mentors with similar goals in order to help them reach it through collaboration.

### Personal Website Portfolio

- Developed a personal web portfolio to showcase my projects, experience, and skills
- Written in Javascript and ReactJS using GatsbyJS starter website package. Marked up in HTML/CSS

### HP21 Calculator Clone – (in progress)

- Collaborating with a senior programmer to develop a clone of the HP21 calculator
- WPF app (.NET framework) using in XAML and C#

## EXPERIENCE

### SNC-Lavalin – Process Mechanical Engineer

June 2020 – Aug 2020

- Preparing and reviewing design documents and plant modifications in accordance with approved procedures, processes and design requirements for Industrial Manufacturing Facilities
- Completely redesigned Royal Canin Lebanon, TN pet food manufacturing facility in 3 months while remaining under-budget and tight project schedule
- Utilizing BIM technology to model equipment in 3D, coordinate between disciplines through clash detections, and generate equipment/building layouts

### SNC-Lavalin – Structural Engineer

June 2020 – Aug 2020

- Performing structural analysis design of steel, reinforced concrete, and masonry structures for large multi-story industrial/ manufacturing facilities in the agro, pharma, and chemical industries
- Designing structures including building structure, platforms, pipe racks/bridges, foundations
- Mentored new-hires and interns on best practices, software training, and company standards
- Utilized BIM software including Autodesk Revit, Navisworks, ReCap, and markups using Bluebeam

## ACHIEVEMENTS

- Tier 2 Scholarship Awardee to ASCE Structures Congress 2020
- 1 in 2 Regional Society of Women Engineers Future Leader
- Published Technical Research [Paper](#) on ScienceDirect as First Author

## SKILLS

Languages: C, Python, Javascript, ReactJS, SQL, HTML5, CSS3, MATLAB

Technologies: Unix, Git, Django