DAVID AZAR

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TECHNICAL EXPERIENCE

FRONTEND: TypeScript, JavaScript, React, Redux, Material UI, styled-components.
BACKEND: Node.js, PostgreSQL, Prisma, Python, Redis, Docker, MQTT, WebSockets, Serverless, Microservices.
CLOUD: Internet of Things (IoT), LoRa, Google Cloud Platform (GCP), Firebase, Amazon Web Services (AWS), Heroku, Netlify.
NATIVE: Electron.js, React Native, TensorFlow, Android Development (Java), C, Arduino C++, Mongoose OS, ESP32, Bluetooth LE.

WORK EXPERIENCE

STUDIO ELSEWHERE, New York City, NY
Senior Software Engineer (12/20 – Present)
- Spearhead the reengineering of the company's core product. Define technical requirements, determine the viability of solutions, and develop the new product using a micro-service architecture in an embedded Linux environment.
- Build and own the core full-stack application of "Q-Lab", a neuro-research interactive room at Mount Sinai Hospital, enabling researchers to gather and analyze hundreds of patient data points to determine the efficiency of treatments.
- Create a drawing application with computer vision to empower children with limited mobility to draw on-screen by moving their faces across the camera frame. Invented a frontend framework to enable complex canvas + React interactions.
- Co-define product OKRs with the founder and guide a team of 3 Jr. Engineers to achieve the goals within time and budget.

FREELANCE, New York City, NY
Software Engineer (09/20 – Present)
- Identified and implemented technical requirements for a home indoor-farming IoT startup. Built MQTT and database cloud infrastructure, and programmed the iOS and Android app. Tools: GCP, Firebase, PubSub, React Native, Mongoose OS, C.
- Created a dashboard for an IoT company to manage 30+ LoRa gateways and 1,200 IoT sensors, display live decoded data and send alerts when a device goes offline. Tools: React, Material UI, Express.js, Serverless, Git, AWS, and Netlify.
- Engineered an 8x8x10 feet interactive installation for the Multidisciplinary Design group at Jefferson University, Philadelphia to be presented at The Venice Biennale 2021. Tools: Python, computer vision, PubNub, Raspberry Pi, and Linux.

MAYOR'S OFFICE FOR THE CHIEF TECHNOLOGY OFFICER (MOCTO), New York City, NY
Internet of Things Engineering Fellow, Smart Cities (07/20 – 09/20)
- Interviewed 4 City agencies to identify data needs and find the product-market fit for a low-cost IoT deployment.
- Programmed and deployed 3 IoT sensor stations to collect and publish data from the built environment using LoRaWAN.
- Built a real-time visualization dashboard containing 6K+ data points for City agency stakeholders, providing hyper-local ambient data to better inform future resource allocation during heat emergencies.

SYMMETRY STUDIO, Mexico City, Mexico
Co-Founder & Lead Software Engineer, Digital Product (01/2016 – 06/2018)
- Launched a suite of digital products for a luxury hotel. Designed the UI/UX for all products, wrote the Android app and Node.js backend in AWS, and managed a team of outsourced engineers to develop the front-end.
- Designed and built a catalog Android application for a fashion retailer to enable the sales team to convert higher in-store customers, by providing shoppers with branded video content and a frictionless browsing experience.

EDUCATION

NEW YORK UNIVERSITY, New York City, NY
Master's of Professional Studies, ITP Interactive Telecommunications (09/2018 - 05/2020)

UNIVERSIDAD IBEROAMERICANA, Mexico City, Mexico
Bachelor of Science, Mechatronics and Production Engineering (01/2012 - 07/2016)
- **Courses:** Algorithms & Data Structures, OOP, Databases, Embedded Systems, Signal Processing, Control Theory.

PERSONAL PROJECTS

WANDER COMPASS (https://www.davidazar.mx/wander-compass)
- Screen-less, cloud-connected wearable to help people discover streets in New York via a proprietary navigation algorithm.
- The GPS navigation system uses MapBox, Express.js, and turf.js to calculate street-by-street directions and uses WebSockets to transmit instructions to the Android app to relay to the Arduino wearable using Bluetooth LE.

R-SYNTH (https://deibid.github.io/r-synth/index.html)
- Music synthesizer to teach beginners about sound synthesis using WebMIDI, Tone.js, and jQuery.