

EXPERIENCE

- **Brown Brothers Harriman** Boston, MA
Senior Software Engineer Apr 2023 - Present
 - **Data Platform:** As part of the [Ads Serving Platform](#) team, I've worked in the re-architecture of the AdServer platform, in areas like configuration, experimentation and scalability.
 - * **Tech stack:** Java, SpringBoot

- **Twitter** Boston, MA
Senior Software Engineer Sept 2022 - Jan 2023
Software Engineer Dec 2019 - Aug 2022
 - **Ads Serving Platform:** As part of the [Ads Serving Platform](#) team, I've worked in the re-architecture of the AdServer platform, completing the transition to a microservices based architecture and continue its improvement in areas like configuration, experimentation and scalability.
 - * **AdServer:** Led the design and implementation of a rule-based configuration system to enable a dynamic ad search and selection pipeline.
 - * **ShardLib:** Contributed to the implementation of a [Sharding Library](#), used to simplify the management of sharded microservices in the serving pipeline.
 - * **Other:** Regular oncall support for some of the main services used in the ad serving pipeline. Collaboration with partner teams in the introduction of new ad products.
 - * **Tech stack:** Java, Scala, Python, Finatra/Finagle, Thrift



- **GE Aviation** Queretaro, Mexico
Senior Software Engineer Apr 2019 - Nov 2019
 - **Digital Cloud Solutions:** Software Engineer part of a group working in the connected aircraft, leveraging Azure cloud and web technologies to process flight data.
 - * **Connected Aircraft / NEXTNet-avSync:** Developed microservices to extract flight data, process it and send it to the cloud (part Avionics's [NEXTNet-avSync](#)).
 - * **Other:** Collaboration with hardware team to develop APIs to communicate with the backend system. Documentation maintenance. Mentor to junior engineers.
 - * **Tech stack:** Java, Python, Spring, Azure

- Embedded Software Engineer* May 2014 - Apr 2019
 - **Avionics & Digital Systems:** Technical leader for Mexico's team of an IR&D project that focuses on next-generation flight decks, improving the graphical capabilities of display apps and exploring new ways of human-machine interaction.
 - * **Virtual OpenGL:** Contributed to the design and implementation of a custom graphics API based on OpenGL ES. Developed tools to integrate high-level design software with our graphics stack as well as the cross-platform build system for the graphics API
 - * **Digital Moving Map:** Led the development of a digital moving map, designed and build an API for remote drawing, interaction and control, part of the [Open Flight Deck](#) project.
 - * **RPC System:** Designed and implemented a simple RPC system for sending avionics information on top of [ZMQ](#), written in C and with client and server APIs for C, Python, C#, as well as a code generator for transforming JSON formatted data model definition files to ZMQ C API.
 - * **Other:** Conducted global training sessions for users of our Avionics stack, participated in the organization of two successful hackathons directed towards both students and professionals wanting to experience GE's engineering challenges.
 - * **Tech stack:** C, Python, OpenGL, Yocto

EDUCATION

- **Benemerita Universidad Autonoma de Puebla** Puebla, Mexico
Master of Science in Electronics Aug. 2011 – Jun. 2013
Bachelor of Engineering in Mechatronics Aug. 2005 – May. 2010

OTHER PROJECTS

- **Autonomous Mobile Robot:**  [mobile_robot](#) — Mobile robot platform for academic research (Patent [MX/I/2018/100659](#)).
- **dsPIC Peripheral Libraries:**  [dspic33f_pic24h_corelibs](#) — Peripheral libraries with support for UART, SPI, I2C, I/O, QEI, Timers, ADC for the PIC24/dsPIC33F family of microcontrollers.