Jesus Sanchez

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EXPERIENCE

- **Twitter** — Boston, MA
  Senior Software Engineer — *Sept 2022 - Present*
  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 Avionica'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**: Participated in the design and implementation of a custom graphics API based on OpenGL ES with the objective to modernize current flight deck graphics stack, improving not only the performance but also the time from design to implementation. Designed and developed tools to integrate high-level design software (like Inkscape and VisualStudio) with our graphics stack. Developed the cross-platform build system for the graphics API, with support for Windows and Linux, as well as custom embedded Linux images that included our custom graphics back-end, ZMQ, example applications of our HMIs and remote debugging.
    - ∗ **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.
    - ∗ **Landing Gear System Monitor**: Led the design and development of a landing gear system monitor application, test methodology and integration support at the client's facilities.
    - ∗ **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*
  Bacherol 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.