Diego Alonso Martinez de Dios

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EDUCATION

Instituto Tecnologico y de Estudios Superiores de Monterrey <div align="right">Guadalajara, Jal</div>
Bachelor's Degree in Computer Science Engineering <div align="right">Aug. 2016 – Dec 2020</div>

EXPERIENCE

Senior Software Development Engineer <div align="right">2022 – Present</div>
Intel <div align="right">Guadalajara, Mx</div>

- Developing web applications and services for gathering and displaying bug data from telemetry from SOC's debug tools using a stack of tools as React, MongoDB, Golang and Python
- Maintenance and development to the internal REST API in charge of receiving and processing tens of thousands of requests every day for telemetry recollection of hardware failures. Development includes unit testing with PyTest and integration tests configured via Github Actions
- Developed a review system for bug sightings from the UI using React and contributed to the backend API created in Python with FastAPI and Pydantic to create its corresponding endpoints
- Contribution to the team-led effort for the development of a web app dedicated as a viewer of hardware signals created using React and Konva
- Development and deployment of Python packages requested by hardware validation teams configuring their definitions in YAML files ran and automatized by GitHub Actions

System Validation Engineer <div align="right">2020 – 2021</div>
Intel <div align="right">Guadalajara, Mx</div>

- Worked on federal projects for the graphics division of Intel, delivering high-quality results within tight deadlines
- Developed and validated Python software frameworks to debug hardware SOC's via JTAG communication Test Access Ports from the server segment both in pre-silicon emulation and post-silicon platforms used by thousands of users
- Created and enabled new framework packages in Python for support of emulation systems based in Linux, allowing for earlier debugging during the pre-silicon period of the project.
- Developed a plugin for the graphical projects tools, enabling MMIO and PCI Config registers from the system to be accessed through the PCI Express interface via user space which increased debug times compared to TAP devices connected via serialized JTAG chains
- Created plugin extensions in Python for SoC validation to allow read and write operations of MSR registers in x86 virtual platforms
- Collaborated effectively with cross-functional teams located in Bangalore, Penang, Israel, and the US, whose work was dependent on these frameworks

System Validation Intern <div align="right">2018 - 2020</div>
Intel <div align="right">Guadalajara, Mx</div>

- Developed, enabled and provided support for internal hardware debugging tools
- Validated Intel's Platform Controller Hub's execution modules in Python alongside its integration to larger CPU-based projects in the server segment
- Enabled the capability on SoC platforms for debug via Scandump technology to allow dumping and visualization on individual bits of memory channels
- Led the migration of multiple projects from Python 2 to Python 3 following the announcement of Python 2's End of Life

TECHNICAL SKILLS

Languages: Ruby, Javascript, TypeScript, Shell Scripting Language, Python, Golang, C, SQL (Postgres, MySQL), GraphQL
Frameworks and Libraries: React, Node.js, Express.js , Flask, Django, FastAPI, RubyOnRails, Pandas, NumPy, Axios, ESLint
Developer Tools: Git, AWS, GCP, DockerPostman, CURL, Jenkins, VS Code, Eclipse, Vim, Linux