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Experience

2018–2021 **Senior Software Developer**, Sohonet, London, UK.
Member of the product development team of a leading service provider for the media and entertainment industry. We were tasked with providing software to movie studios and production companies.
Responsibilities and specific projects:

- FileRunner 2: Maintenance of our legacy file transfer application.
  Technologies: OpenStack Swift, Python, Django, MySQL, Celery, JavaScript, jQuery.

- FileRunner 3: Design and development of our next generation file transfer application. The main objective was to create a fast upload experience, by leveraging parallelism both at the browser and the infrastructure levels. This enabled the transfer of multi–terabyte files, as is characteristic of the media industry. Performed management duties for the frontend sub–team.
  Technologies: OpenStack Swift, Python, SQLAlchemy, Marshmallow, Nameko, PostgreSQL.

- ClearView Flex: Design and development of our industry–leading video streaming platform. The main objective was to build a ultra–low latency streaming solution, built on commodity hardware and standard network connections. This allowed members of the media industry to share and get feedback on anything from live editing sessions to live camera footage. Involvement in all three sub–teams: backend, frontend, and systems.
  Technologies: Python, SQLAlchemy, Marshmallow, Nameko, PostgreSQL, Redis, ElasticSearch, JavaScript, React, Redux, C, gstreamer, ffmpeg, Puppet, Terraform, Linux, Docker, Packer.
  Awards:

  - 2020 HPA Engineering Excellence Awards Honourable Mention.
  - 2020 Engineering Emmy® Award.

2017–2018 CTO, LonCom, London, UK.
We continued the work started in Shared Property Data under the umbrella of LonRes, an established company in the PropTech sector.
Responsibilites and specific projects:

- As the lead architect I designed a new system from the ground up, learning from our experience running Shared Property Data. The result was a system much more stable and straightforward than its predecessor, which allowed us to build a much more connected and coherent property graph.

- Design and development of a transactional engine capable of creating a property graph, linking commercial property lettings and sales, agents, firms, and properties.
  Technologies: Python, SQLAlchemy, Marshmallow, PostgreSQL, ElasticSearch.

- Design and development of a REST API around the core engine.
  Technologies: Pyramid, Gunicorn.

- Coordinated the development of a web frontend, consuming the APIs and providing a user-friendly experience, tailored around the needs of commercial property agents and built based on their direct

feedback.
Technologies: TypeScript, React, Redux.

- Coordinated the devops aspect, ensuring the team got exact requirements for both development and production systems, and collaborating closely with them during the process.
Technologies: Ansible, Docker, Linux.

- As a tech lead I coordinated a team of between four and six people, managing the technical architecture and collaborating with our product owner in the creation of a product roadmap.

- As a board member I took part in shaping the general business strategy, and liaising with stakeholders to align the technical and commercial visions.

2014–2017 LEAD SOFTWARE ENGINEER/CTO, Shared Property Data, London, UK.
Responsibilities and specific projects:

- First technical member of the team; architected, prototyped and wrote the product, and led its evolution.

- Design and development of a REST API, acting as the backend for the whole platform.
Technologies: Python, Django REST Framework, PostgreSQL, Celery.

- Unit, integration, regression, penetration, performance and acceptance test suites; automated QA through a CI system.
Technologies: Pytest, Jasmine, Karma, Jenkins.

- Development of a consumer–facing frontend, based on a modern, single–page application. It serves as a reference implementation for an API consumer.
Technologies: JavaScript, AngularJS 1.x.

- Design and evolution of a semantic, fine–grained and geospatial search engine.
Technologies: Apache Solr, ElasticSearch.

- Systems administration, including staging and production servers, as well as management of the deployment process.
Technologies: FreeBSD, Nginx, Salt.

2014 SOFTWARE ENGINEER, Wazoku, London, UK.
Responsibilities and specific projects:

- Senior backend engineer, in charge of maintaining the company's product (Idea Spotlight), and planning, implementing, testing and deploying new features.
Technologies: Python, Django, Bottle, JavaScript, CouchDB, PostgreSQL, ElasticSearch, Celery.

- Implementation of a brand–new search engine, based on Apache Solr, aimed at improving the reliability and performance of the previous system, as well as extending the search capabilities of the application, providing room for future improvements and extensions.
Technologies: Apache Solr, Haystack.

- Creation of a new configuration management and deployment system, aimed at increasing the system's reliability, scalability and fault tolerance, while reducing downtime during the deployment of new versions of our application.
Technologies: Fabric, Salt, Grunt, HAProxy.

- Acting systems administrator, responsible for monitoring the company's cloud infrastructure and solving any incidence in the shortest time possible, thus maintaining our SLA.
  Technologies: Linux, Nginx, Monit, Python.

- Maintenance of the test suite, running it through a continuous integration system and verifying its build status before every release, guaranteeing that every release is clean.
  Technologies: Nose, Jenkins.

2011–2013   LEAD DEVELOPER, ITEISA Desarrollo y Sistemas, S.L., Santander, Spain.
General tasks:

- Management of the software development process and code life cycle, from requirements analysis and specification to deployment and maintenance.

- Level 3 technical support, performing tasks regarding performance and security code audits, software installation, upgrading and configuration and end–user training.
  Technologies: OTRS.

- Implementation of the ISO/IEC 15504 standard; preparation of the documentation regarding software development process and testing methodologies.

- Streamlining of the company's software development process, migrating to a version control system, an issue tracking platform and an automated configuration and deployment system.
  Technologies: Git, GitLab, Puppet.

Specific projects:

- Design and development of a search engine on top of the whole body of parliamentary acts of the Spanish Congress; performance and accuracy testing and tuning.
  Technologies: Apache Solr, Kyoto Cabinet, OpenNLP, OpenCalais, Perl.

- Design an development of a window configuration system, to be integrated into a window manufacturer website.
  Technologies: JavaScript, Processing.js, jQuery, CakePHP, MySQL.

- Design, development and deployment of a real–time distributed rendering system for a shoe–customisation web application; strong focus on integration, performance and system testing.
  Technologies: CakePHP, ImageMagick, MySQL, FastCGI, POV–Ray, Autodesk Maya, ZeroMQ.

- Design and development of a scraper to extract the gas price for all gas stations in Spain from the official database; development of web and mobile apps, using custom algorithms to improve search results based on user's history and localisation.
  Technologies: Python, Requests, SQLAlchemy, MySQL, CakePHP, HTML5, jQuery Mobile, PhoneGap.

2011   HW/SW ENGINEER, TEDESYS Global, S.L., Santander, Spain.

- Design and implementation of a stereo vision system; adapting current computer vision algorithms for implementation in a FPGA system.
  Technologies: C/C++, VHDL, OpenCV, dc1394, Boost.

2008,2009   Summer grant, Magnetoplasmonics group, Madrid Microelectronics Institute (IMM – CSIC), Madrid, Spain.

- Debugging, improving and extending a scattering–matrix based numerical code, to be executed in a multi–processor system.
  Technologies: C/C++, BLAS, Lapack.

Education

2005–2010   MSc in Telecommunications Engineering, Universidad de Cantabria; speciality on microelectronics.

Microelectronics specialisation

Design and verification of digital integrated circuits.
Design of full–custom analog integrated circuits.
Embedded systems design, especially systems on chip (SoC). Development of task–specific hardware accelerators in VHDL.

Languages

Spanish, native speaker.
English, fluent. Technical assessment in juridic and technical translations.

IT Skills

Programming languages

Python, JavaScript, TypeScript, UNIX shell scripting.
Working knowledge of C, C++, Ada, PHP and Go.

Operating system administration

Linux, *BSD (OpenBSD, FreeBSD).

Web development

Frontend: HTML5 & CSS3, JavaScript, React, Redux.
Backend: MVC frameworks based on Python (Django, Flask, Bottle) and on PHP (CakePHP).

Database management systems

Relational databases: MySQL, PostgreSQL.
NoSQL databases: MongoDB, Redis, CouchDB.
Search engines: Apache Solr, Elastic Search.

Version control systems

Centralised: Subversion.
Distributed: Git.