Alexander Hoffmann

Passionate Software Engineer with Infrastructure expertise.

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EDUCATION

- **ECE Paris** — France
  Engineering Degree in Computer Science — *2016 – 2021*
- **University of California San Diego** — San Diego, USA
  Extension program in Computer Science and Engineering — *2018*

PROFESSIONAL EXPERIENCE

- **Société Générale** — Paris, France
  Software Engineer — *2021 – Present*
  - Full-time software engineer in the Société Générale advanced development team on LUCID project.
  - Building a REST API to programmatically manage Hadoop clusters. It provides configuration and service lifecycle management, service health metrics, and setting up high availability and decommissioning.
  - Working on SSO integration, clustering interface support, and appliance stack management.

- **Hoffmann ai** — Paris, France
  Founder & Tech Lead — *2020 – Present*
  - **Spotmydive** Write client-side code (GatsbyJS) for web-based high-volume production application (120,000 unique visitors/mo). Improve conversion rate and overall SEO by 20%.
  - **Orange** Design, create and maintain a scalable web-based dashboard application using TypeScript and MongoDB for back-end and ReactJS for front-end. Reduce customer acquisition cost by 5%.
  - **GEFCO** Design, develop, test, deploy, maintain and improve front-end (ReactJS) and back-end (C#) for highly available web application. Improve work performance and productivity by 10%.

- **Deutsche Telekom** — Bonn, Germany
  Digital Competence Instructor — *2021*
  - Research and coursework towards a technical certification with a focus on the Web.
  - Taught Programming Languages and Network Security in the context of Web development.

- **Sadnacaya GmbH & Co. KG** — Düsseldorf, Germany
  Software Developer — *2018 – 2021*
  - Contributed to a wide variety of projects using natural language processing, artificial intelligence, data compression and search technologies.
  - Configured a Manjaro VM onto a QNAP NAS to automatically back up mission-critical data on Write-Once-Read-Many archive storage.
  - Provided advanced corporate network infrastructure and server support.

- **Adaltas** — Paris, France
  Software Engineering Intern — *2020*
  - Contributed to an open-source provisioning, configuration management, and application-deployment software enabling infrastructure as code.
  - Worked on scalability issues involving access to data and information.

- **Préfecture de police de Paris** — Paris, France
  Software Development Intern — *2019*
  - Developed a Java application to control backups and automatically notify system administrators.
  - Implemented features to internal web applications to meet user demands and improve overall performance.

- **Ayacandas GmbH** — Düsseldorf, Germany
  Software Tester — *2017 – 2018*
  - Development of an online exchange platform for hospitals and other medical institutions.
  - Worked on quality control of the system to ensure that the software solution meets the requirements.
  - Performed analysis of the anomalies and documented progress report on the testing campaign.

ACADEMIC EXPERIENCE

- **ECE Paris** — Paris, France
  Associate Professor of Computer Science — *2020 – 2021*
  - Graduate student instructor for advanced computer science courses.
  - Shared responsibility for leading sections, developing coursework including homeworks and projects.

Volunteering

- **President & Founder** — Paris, France
  Les Voiles Françaises - sailing club — *2021 – Present*
  - Organized and participated in committee meetings and club activities, as needed.
  - Developed budget of the club and managed its budgeting affairs, efficiently.

- **Treasurer** — Paris, France
  Genius Campus Eiffel - entrepreneurship club — *2019 – 2021*
  - Oversaw and presented budgets, accounts and financial statements to the management committee.

Open Source Personal Projects

- **Wava (Java)** [github] : Collection of general-purpose utility classes with wide applicability.
  - Created static methods that operate on or return hash-maps.
  - Implemented unit tests using JUnit.
  - Continuous integration using Travis CI.

- **Docsight (Python)** [github] : A tool for analyzing scanned files and export their content.
  - Used OpenCV to remove noise and clean up image.
  - Implemented Tesseract OCR to recognize text from image.
  - Exported content as JSON, could easily be exported to a NoSQL database.

- **School Management Tool (Java Spring)** [github] : A web-based, extensible platform for managing schools.
  - Used Hibernate to implement a relational database.
  - Created a dynamic search engine using Elasticsearch.
  - Deployed web application to AWS.

- **Ecezon (PHP Laravel)** [github] : A free, open-source e-commerce platform written in PHP based on Laravel.
  - Implemented online payments with Stripe.
  - Created dynamic search engine using Algolia.
  - Deployed web application to Heroku.

- **Mini Router (C/C++)** [github] : Simple router given a static network topology and routing table.
  - Created a simple router given a static network topology and routing table.
  - Implemented ping and traceroute to and through the router.
  - Handled various Ethernet packets including ARP, TCP/UDP, HTTP and ICMP.

Open Source Contributions

- **Node.js Nikita (CoffeeScript)** [github] : Automation and deployment solution with Node.js.
  - Migrated and refactored low level functions of the core engine.
  - Implemented unit tests to ensure functioning of actions both locally and remotely (via ssh).
  - Created Docker containers to ensure tests are executed in a proper Linux-based environment.

Technical Skills

- **Languages (alphabetically)** : C, C++, Java, JavaScript, LaTeX, Markdown, Python.
- **Big Data & Analytics** : Ambari, Elasticsearch, Hadoop Stack.
- **Databases** : MongoDB, MySQL, PostgreSQL.
- **DevOps & InfraOps** : Airflow, Ansible, Docker, Git, Jenkins, Kubernetes, Vagrant.
- **Web technologies** : AWS, CSS, HTML, NodeJS, ReactJS, Shopify, Wordpress.
- **Other Software & Technologies** : Computer vision, googling, networking, vim, virtualization.

Skills & Interests

- **Languages** : French (mother tongue), German (mother tongue), English (fluent), Spanish (notions).
- **Actuarial science** : applying mathematical and statistical methods to assess risk in finance.
- **Chess** : ranked approx. 1600 elo.
- **Athletics** : vice-champ in 100-metre dash, third place in triple jump at the regional level (Île-de-France).
- **Sailing** : seaman with a track record of successfully operating and supervising boating excursions.