

# Henri Chain

Senior Software Engineer

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## Education

- 2016–2017 **Masters in Real-Time and Embedded Systems**, *Ecole Centrale de Nantes*, Nantes, France
- July 2014 **Entry Competition (accepted)**, *42 School*, Paris, France  
A month-long programming course and competition, providing entry to a new software engineering school.
- 2011–2015 **Engineering Student**, *Ecole Centrale de Nantes*, Nantes, France  
A highly selective (top 5) French school of engineering conferring a diploma equivalent to a master's degree. Major in robotics.
- 2008–2011 **Classes préparatoires MP\***, *Lycée Hoche*, Versailles, France  
An intensive course in mathematics, physics and chemistry, preparing for the national competitive entry examinations for French schools of engineering.

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## Work Experience

- November 2017–2021 **Software developer and Consultant**, *enioka Haute Couture*, Paris, France  
Software engineer at a small, high-end software service company.  
Designed and built integrated business applications, custom websites, and middleware. Audited systems and applications within large enterprises and gave recommendations. Selected projects:
- Designed the software architecture and led a team developing an android mobile app that handles pickup and dropoff for a major parcel delivery network. (kotlin, android)
  - Developed open-source software for the KDE project on behalf of an American video game publisher (C++, Qt, C, systemd).
  - Designed and developed a podcast management solution including the backend for a mobile application, backoffice UI, and audio distribution system for a Paris-based B2B podcast startup (django, react, cloudfront).
  - Designed and developed an address database management system and data cleanup pipeline for a major logistics company (Elasticsearch, Java 8)
  - Built an internal web platform to schedule, maintain and organize the deployment of cloud security rules for a global French bank (django, ansible, postgres).
  - Designed the technical architecture and developed software for an API management solution based on Kong at a french luxury retail chain (Kong, lua, azure).
- April–September 2016 **Final year Internship**, *Sterblue*, Nantes, France  
Development of computer vision algorithms for defect and geometry detection on electrical structures  
Designed and implemented a computer vision system in the cloud, making use of deep learning to automatically detect various defects on wind turbines and power line towers at a young startup developing drones for industrial inspection.
- June–August 2015 **Summer Internship**, *Flick und Partner*, Munich, Germany  
Development of a CHAdeMO-compatible vehicle-to-grid platform  
Designed and wrote software for embedded Linux to implement the CHAdeMO charging protocol exploring the use of electric vehicles as energy storage for grid stabilization.
- Oct. 2014 to Mar. 2015 **Gap Year Internship**, *LESIA*, Meudon, France  
Automation of the VIRTIS and RPWS space probe instruments ground processing pipelines  
Made observational geometric data for the VIRTIS spectrometer on Rosetta available on a database.  
Developed an automatic processing pipeline for the RPWS radio instrument on Cassini.
- July–August 2012 **Internship**, *IFREMER*, Brest, France  
Flow Visualization from HPC climate model results on the IFREMER high-performance computing cluster

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## Skills

Programming Python, C/C++, Typescript, Bash, C#, Kotlin, Java, Lisp, Rust  
Frameworks .net core, React, django, Qt, OpenID Connect  
Software Solidworks, Eagle, KiCad, Matlab, PostgreSQL, Elasticsearch, L<sup>A</sup>T<sub>E</sub>X, TensorFlow, Ghidra, IDA  
Systems Docker, systemd, solid knowledge of linux-based OSes.

## Spoken Languages

French Native  
English Fluent *TOEIC: 990/990*  
German Basic skills  
Japanese Beginner level

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## Interests

Science Passionate about planetary science  
Hardware

- Member of university robotics club participating in yearly competitions
- Embedded linux (Raspberry pi...)
- Vintage audio restoration
- Hardware hacking and reverse-engineering
- Electronics ( $\mu$ Controllers, PCB design)

Software

- Linux Kernel contributions
- KDE, free software contributions
- Machine learning

Cyber

- Participation in CTFs (SSTIC, Flare-On, hack.lu, challenge DGSE...)
- Binary reversing
- Information security news