

# Dirk Hornung, Software Engineer

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## About me

I am Software Engineer by passion. During my 5+ years of experience as a professional developer I led the technological infrastructure of three Startups. Apart from implementing a new YouTube feature I am advising a team of three developers while taking care of their infrastructure (self hosted Kubernetes + CEPH cluster) and PostgreSQL backend.

## Professional Experience

- Present **Contract Software Engineer**, Counter Abuse Technologies, *Google*  
Mar 2020
- Implemented WebRTC video streaming frontend and FaceMesh Tensorflow model.
  - Implemented accessibility features.
  - Ensured quality with unit and integration tests applying TDD.
- Present **CTO & Co-Founder**, Server Infrastructure, *Aplikato* (Startup)  
Jan 2020
- Advising a team of four software developers.
  - Implemented PostgreSQL database served via a Flask API.
  - Built server and networking infrastructure. Implemented Kubernetes with dynamic Ceph storage provision and Jenkins CI/CD automation.
- Mar 2020 **Data Scientist**, Data Lake Architecture, *Fresenius Medical Care*  
Jan 2020
- Architected the storage, query, and application layer of a Data Lake using Kubernetes, MinIO, Parquet, Presto and Ranger (see: [Data Lake Architecture at Fresenius Medical Care](#)).
- Apr 2019 **CTO**, Ethereum Blockchain, *CYSAE* (Startup)  
Mai 2018
- Led a two people developer team.
  - Implemented an Utility Token to allow for the trading of legal services.
  - Implemented a web application anchoring documents in the Ethereum blockchain using Solidity, React, GraphQL, S3 and Postgresql hosted on AWS EKS.
- Apr 2018 **CTO & Co-Founder**, Fintech Chatbot, *Alda* (Startup)  
Oct 2017
- Implemented a Fintech Chatbot using React, Flask, Postgres and Tensorflow hosted on AWS (see: [How to build a chatbot from zero](#)).

## Education

- Jul 2019 **Ph.D., Theoretical Physics**, *Universitat Autònoma de Barcelona/Aix-Marseille Université*, A grade  
Oct 2015
- The QCD Strong Coupling from Hadronic Tau Decays.
- Implemented a parallized and unit tested C++ fitting routine to extract model parameters using data provided by CERN.
- Sep 2015 **M.Sc., Particle Physics**, *Universitat Autònoma de Barcelona*  
Oct 2014
- 1-Loop Anomalous Dimensions of 4-Quark Operations.
- Sep 2014 **B.Sc., Condensed Matter Physics**, *Goethe University*  
Oct 2011
- Band Structure Studies of Graphene

## Main Skills

- Languages TypeScript, JavaScript, Python, C++, Java, SQL
- Style TDD, OOP, dependency injection, pair programming, CI/CD
- Stacks Node.js, Express, Angular, React, Vue, Flask, Jest, AWS
- Software Git, Docker, Kubernetes, PostgreSQL, NFS, Jenkins

## Awards

- Best Fintech Pitch at "Fintech War" (1000 EUR)
- MetLife Iberia Financial Inclusion Award (4000 EUR)
- Winner Adidas Hackathon Barcelona (6000 EUR)