

# Dirk Hornung, Software Engineer

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## About me

I am Software Engineer by passion. During my 5+ of years of experience as a professional developer I implemented a C++ fitting routine extracting model parameters from CERN data and a NLP chatbot using Python and Tensorflow. I can beat songs on Expert+ on Oculus BeatSaber.

## Professional Experience

- Present **Contract Software Engineer**, Counter Abuse Technologies, *Google*
- Mar 2020
- Implemented WebRTC video streaming frontend and FaceMesh machine learning model.
  - Implemented accessibility features.
  - Ensured quality with unit and integration tests applying TDD.
- Present **Maker**, Extended Reality, [Project](#)
- Decem-ber 2020
- Creating an extended reality glass prototype using a Nvidia Jetson Nano, a RGB-D camera, a stereo camera, a gyroscope sensor and two OLED displays.
  - Implementing a hand pose model.
- Mar 2020 **Data Engineer**, Data Lake Architecture, *Fresenius Medical Care*
- Jan 2020
- Architected the storage, query, and application layer of an Azure based 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, GraphQL, Angular, React, Vue, Flask, Jest, Azure
- Software Git, Docker, Kubernetes, PostgreSQL, Ceph, Jenkins

## Awards

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