Software Engineer
December 2022 - October 2023
Velo3D *San Jose, CA*

- **Developed C++ and Python software, to control electronic, pneumatic, and optical systems for metal 3D printers,** involving numerous multi-threaded processes across multiple embedded systems.
- **Implemented a crucial functionality**, accessible through the main UI (QML), enabling customers and manufacturing engineers to effortlessly monitor and override process-critical settings on different servers. This ensures a reliable qualification process for new printers, contributing to the overall system's robustness.
- **Collaborated as a team member in an agile development process using Jira, Git, pull request reviews and CI/CD with Jenkins.** Demonstrated a strong commitment to being a team player throughout the development cycle.
- **Enhanced O_2 correction** using multiple sensors and applying effective filtering techniques, decreasing printer build failure rate.
- **Upgraded the BKM framework of the laser controller firmware** through additional available configurations.
- **Reworked the consistency of powder bed recoating** using asynchronous pneumatic controls.

Software Engineer
March 2022 - December 2022
Qualcomm *San Diego, CA*

- **Developed hundreds of APIs using Python and C++** to support libraries, improving software functionality and system performance.
- **Utilized OpenCL, OpenGL, and EGL to enable graphical features** on embedded systems.
- **Conducted validation on Qualcomm's internal camera APIs** for the latest chipset firmware builds.
- **Created an audio capture and playback tool** for Linux-based virtual machines using the ALSA library.

Machine Learning Engineer
June 2021 - August 2021
Kapaix Ltd *London*

- **Designed neural network models to detect anomalies** by analyzing discrepancies in time series data, assessing database quality.
- **Preprocessed the dataset** by creating histograms with variable time frames and applying PCA and K-means clustering as initial analysis.
- **Constructed two ML models** (classification and autoencoder based) using Python with TensorFlow, and Pandas.