HANS C. GUNDLACH

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Education

- **UC Berkeley, major: Mathematics, Physics GPA: 3.8, 2017-**
- **Exchange student for two semesters at EPFL, Lausanne, Switzerland 2018-2019**
- **Lakeside High School, Seattle, 2013-2017**

Projects/Work

- **Quantum Computing and Machine Learning Researcher**
  - September 2020 - : Currently, investigating reinforcement learning algorithms to tackle problems in quantum circuit design as part of Professor Lin's group at UC Berkeley. Recent Paper (Link)
- **Pasto, Colombia Tensorflow Traffic Counting System**
  - 2019: Worked on behalf of Swiss government sponsored organization, Ingénieurs du Monde, to alleviate traffic and investigate safe bike lanes in Pasto, Colombia. Designed neural network traffic detection system using Tensorflow APIs for the specifications of the University of Nariño and the Transportation Bureau of Pasto. System was able to accurately recognize and count buses, taxis, and bicycles. Gave a 6 hour workshop on deep learning at the University of Nariño.
- **Lakeside School Attendance System**
  - 2017: Initiated, implemented, and sold automatic Wifi attendance system after identifying problem with previous slow manual sign in system. I built the system using Java, JFrame, SwingWorker, and SMB. I worked with the administration to design the UI to their specifications. Lakeside High School bought the system and it is currently (pandemic excluded) in use keeping highly-accurate attendance information on 600+ students.
- **MazeVR - Android-Unity Development**
  - 2016: Designed and co-developed VR maze game for Android using Unity and automatic mesh generation libraries. App was selected for VR exhibit at Seattle Mini-Maker Fair. App has been downloaded over 300 times.
- **Paid Bioinformatics Intern at Fred Hutchinson Cancer Research Center**
  - Summer 2017: Researched and designed quantitative metrics to find the ancestry of metaplastic tissue using Illumina 450k methylation data and R.
  - Summer 2016: Analyzed cancer sample data set (200 samples, 450k methylation values per sample) and and built a system for visualizing data sets using R.
- **Other Projects**
  - 2015: Initiated and implemented the first ever full-scale web Latin conjugation tester to help my Latin classroom with test prep. Developed website to conjugate over 1,000 Latin verbs in 25 conjugations using WAMP stack. Website helped over 1500 unique students during May 2015.

Achievements and Activities

- Winner of Global Hacks 2020 for CovidAccountable, a chrome extension that highlights US-COVID funding.
- Art (link) selected for 20 under 20 exhibit at Bellevue Art Museum
- Writer for Berkeley's satirical magazine, *The Heuristic Squelch*