

# BEN KURTZ

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<https://benkurtz.org>

Merced, CA 95340

## EXPERIENCE

### MILANO TECHNICAL GROUP — OCT 2018 - JULY 2020

Software Engineer

- ▶ Agricultural automation and autonomy, including lidar obstacle avoidance and localization

### TESLA ENERGY — OCT 2017 - FEB 2018

Engineering Intern

- ▶ Energy market participation software for utility-scale battery storage

### ENERNEX — JUL - SEPT 2012

Research Intern

- ▶ Software for importing electrical grid models and analyzing effects of solar energy

### UC SAN DIEGO — 2011 - 2017

Graduate Student Researcher

- ▶ Algorithm development for solar energy forecasts based on sky images
- ▶ TA engineering thermo, including recitation sections, teaching one week of lectures, and writing exams
- ▶ Build and maintain lab group website, 20+ compute servers, and 400 TB of disk storage

### SOLAR DECATHLON TEAM — 2010 - 2011

Engineering Team Member and Webmaster

- ▶ Assist with design of PV, electrical, lighting, and smart-home networking systems for zero-energy home
- ▶ Website design, coding, and maintenance

### NATIONAL RENEWABLE ENERGY LABORATORY — JUN - AUG 2010

Summer Undergraduate Laboratory Internship

- ▶ Assembly and programming of a novel instrument to measure broad-spectrum specular mirror reflectance

### APPLE, INC. — JUN - SEPT 2007

Retail Specialist

## EDUCATION

### UNIVERSITY OF CALIFORNIA SAN DIEGO

PhD in Mechanical Engineering (2011 - 2017)

### CALIFORNIA INSTITUTE OF TECHNOLOGY

BS in Physics (2007 - 2011)

## SELECTED COURSEWORK

**ENGINEERING:** fluid dynamics, thermodynamics, radiative transfer, solid state device lab **MATH:** linear algebra, calculus, ODEs & PDEs, complex analysis, statistics **PHYSICS:** classical and quantum mechanics, E&M, statistical physics, relativity, analog electronics lab, nuclear physics lab, solid state physics, order of magnitude physics **COMPUTER SCIENCE:** numerical computing, machine learning **ENVIRONMENT:** atmospheric thermodynamics, cloud dynamics, intro to environmental science **MISC:** chemistry, biology, harmony, anthropology, French, Danish

## KNOWLEDGE AND SKILLS

- ▶ Computer programming in assembly, C, C++, Objective-C, Perl, MATLAB, Python, and SQL, among others
- ▶ Software deployment platforms, including git, Jenkins, Docker, Kubernetes, and ROS
- ▶ Sensor integration: lidar, GPS, imaging, EtherCat
- ▶ Web Design and programming in HTML, CSS, and Javascript
- ▶ Linux/UNIX system administration
- ▶ Machine shop training (mill, lathe, band saw, CNC, 3D printer, etc)
- ▶ Theatrical lighting design and set construction

## PUBLICATIONS AND INVITED TALKS

- ▶ Please see <https://benkurtz.org/research.html>