

# RICHARD BLAKE GOODWYN

blackwoodthird@gmail.com

linkedin.com/in/richard-blake-goodwyn

## EDUCATION

---

### Imperial College London & the Royal College of Art

Candidate for Master of Science & Master of Art in Innovation Design Engineering

Expected June 2024  
London, United Kingdom

### Cornell University

Bachelor of Science in Mechanical & Aerospace Engineering, Minor in Computer Science

Graduated May 2017  
Ithaca, NY

## PROFESSIONAL EXPERIENCE

---

### Function Engineering

Mechanical Design Engineer

November 2017 - Present  
San Francisco, CA

- Develops physical products through client-facing consultation; key tasks include mechanical brainstorming, feasibility studies, 3D modeling, rapid prototyping, reliability testing, manufacturing support, and manufacturing error analysis
- Manages development and production efforts by facilitating manufacturer interactions, analyzing FAI data, supporting area-expert contractors, and implementing corrective actions as needed
- Designs and builds mechatronic systems for clientele in medical, robotic, and consumer electronic sectors
- Integrates various technologies (optical, thermal, tactile, electromagnetic) into existing products, including development and validation of proof-of-concept architectures
- Managed medical-precision motion controls development and validation with software/firmware stakeholders
- Oversees junior engineers in early stage project work, mentoring in best practices and design fundamentals

### Cornell University Unmanned Air Systems

Airframe Design Team, Safety Lead, & Field Test Specialist

September 2014 - May 2017  
Ithaca, NY

- Led systems-level architecture development for autonomous aircraft with principal focuses in modularity, aerospace-grade reliability, and rapid manufacturing-centered design
- Oversaw field test operations, developed airframe validation testing procedures, and created flight simulations for ground-based software-in-the-loop testing
- Awarded Best Technical Design, 2nd Place Overall in 2016 and 2017 AUVSI SUAS Competition

### OpenROV (now Sofar Ocean Technologies)

Hardware Development Intern

June 2016 - August 2016  
Berkeley, CA

- Designed and prototyped neutrally buoyant camera mount peripheral for underwater drone, Trident
- Created autonomous test fixture for real-time, life cycle fatigue testing of gaskets and seals in drone prototypes
- Formed foundational go-to-market strategy by researching market segments and developing peripheral concepts
- Sponsored by the Kessler Fellows Program, a selective student entrepreneurship program at Cornell University

## TECHNICAL SKILLS

---

**Computer-Aided Design** Professional experience with Solidworks / Creo / Siemens NX modeling packages; version control systems (SVN and Git); Class A surfacing; top-down master modeling for complex, 500+ part design databases

**Manufacturing** DFM/DFA experience with injection molding and machining for mass production volumes; industry GD&T practices; FAI and production analysis; production defect FA / CA; analysis of manufacturing process selection

**Embedded Devices & Programming** Experience with Python / C / C++ development for embedded applications; prosumer-grade microcontrollers (Arduino / Raspberry PI); variety of production-level controllers (Elmo, Galil, Copley, Trinamic); debugging embedded communication protocols (I2C, SPI, CAN)