Asbury O. Cao

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EDUCATION

University of California Merced   *August 2013 – Fall 2017*
Bachelor of Science, Mechanical Engineering
Engineer-in-Training Certification, State of California   *July 2018*

SKILLS

- **Software:** AutoCAD, ANSYS, Arduino, Bluebeam Revu, Design Tool, Microsoft Office (Word, PowerPoint, Excel), Mission Planner, Onshape, PTC Creo Parametric 3.0
- **Programming:** Fortran, Matlab
- **Interpersonal:** Fluent in English and Tagalog

WORK EXPERIENCE

Element Materials Technology   *Morgan Hill, CA*
EMC/RF Compliance Engineer I   *November 2019 – April 2022*
- Performed radiated and conducted testing for wireless devices to ensure compliance of FCC standards.
- Co-led various projects by overseeing test procedures and providing technical support to clients.
- Compiled data and drafted reports for FCC review to obtain device certification to be sold on the market.

Siemens Building Technologies   *Hayward, CA*
Systems Engineer I   *April 2018 – November 2019*
- Designed building automation systems for standard and critical environment facilities for sites such as Genentech SSF and Kaiser Permanente.
- Interpreted mechanical/electrical plans and specs to select various controls schemes for air handling units, chillers, and boilers.
- Utilized AutoCAD and Microsoft Excel to generate submittals consisting of mechanical system layouts, electrical wiring diagrams, bill of materials, sequence of operations, and direct digital control panel layouts.

PROJECTS

Hot Water Pest Eradicator, Capstone Project   *August 2017 – December 2017*
- Built a closed treatment container with a complex piping network to treat ornamental plants with hot water and reduce the use of harsh chemicals.
- Created a system controller using Arduino Mega to adjust a thermostatic mixing valve and achieve target temperature that prevents damage to plants during treatment.
- Managed the team's budget and conducted purchases for parts to create a more cost-effective solution in the replacement of pesticides.

Road Bicycle 3D Printed using Fused Deposition Modeling   *Merced, CA*
Research Assistant   *May 2017 – December 2017*
- Assisted in designing a bike frame by 3D printing nylon filament infused with carbon fiber.
- Created lattice structures in frame's internal body using online CAD software, not achievable with traditional bike manufacturing methods.
- Used ANSYS simulation software to reduce material of frame after topology optimization to lower cost/resources while maintaining structural integrity.

Machine Shop Research Training   *August 2017 – November 2017*
- Gained hands-on experience in manufacturing methods and fabrication
- Operated horizontal bandsaw, metal lathe, milling machine, and CNC with support of SolidWorks

DUI, Unmanned Aerial Systems   *December 2016*
- Participated in a team of three to propose a startup Drone Company.
- Customized drone's flight pattern with Mission Planner and recorded data via GoPro to simulate a functional food delivery business.