Christophe Foyer

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Education:

Washington University in Saint Louis, United States	August 2014 – December 2017
B.S. in Mechanical Engineering,	3.14/4.00 GPA
Minor in Energy Engineering	

- Dean's List (Fall 2014)

RWTH Aachen, Aachen, Germany	June - July 2017
Renewable Energy Technology | Mechatronics and Product Innovation	

- Summer courses. Successful completion with 2.3/5.0 and 1.3/5.0 respective grades

School for International Training, Reykjavik, Iceland	June - August 2015
Renewable Energy Engineering and Resource Economics	

Lycée Sainte Marie, Caen, France	September 2010 – July 2013
Serie S (Science specialization)	

- Baccalauréat "Mention Bien" (with honors)

Experience:

Design/Build/Fly at Washington University in St. Louis	March 2016 – December 2017
Co-Founder and Systems Team Lead	March 2016 – December 2017
Treasurer	August 2016 – May 2017

- Co-led the team to 12th place out of 138 teams at the AIAA DBF 2017 competition
- Designed aircraft internal system including battery and motor selection
- Worked on sub-projects with the Systems team including RC electronics training
- Managed an operating budget of $10,000 to buy supplies and organize travel to the competition
- Scheduled weekly meetings with the team and set project deadlines

American Society of Mechanical Engineers at Washington University	January 2016 – December 2017
Event Planner	September 2016 – May 2017

- Assisted ASME members with ongoing projects by outlining steps for manufacturing processes and component selection
- Researched potential STEM-related speakers to fit within budget constraint, presented reasons to fund Michio Kaku's visit to campus, secured date for visit

Domaine du Vivier	June 2015-August 2017
Seasonal farm hand	*Seasonal

- Maintenance and operation of farming equipment and various agricultural work during the summer.

Ishinomaki Christian Center	May 2014
Volunteer	

- Construction of two wooden terraces for the local community and various maintenance work

Projects:

Senior Design: (Aug 2017 – Dec 2017)	*Foyer, Christophe; Rangwala, Adam; and Nana, Deep, "Water Lenses for Low-Cost Concentrator Photovoltaics" (2017). Mechanical Engineering Design Project Class.* • *Coding of FEA and ray tracing software for optics simulation in MATLAB* • *Development of a sunlight tracking circuit and coding using Arduino* • *Creation of a working proof of concept prototype*
Motor Test Stand: (Aug 2017 – Dec 2017)	*Design and construction of a motor test stand for Wash. U Design/Build/Fly:* • *GUI development, serial communication protocol and sensor integration* • *Coded in Python and C++* • *Measures RPM, current, voltage, and thrust and logs output to CSV*
Electric longboard: (Oct 2016 – Dec 2017)	*Design and construction of a homebuilt electric longboard:* • *CAD, FEA, and part fabrication (machined aluminum and 3D-printed PLA)* • *System design and component selection* • *Designed according to air travel and personal transportation regulations*
Smart Home: (Jan 2015 – May 2017)	*Custom-built smart home and media center system:* • *Voice recognition using google API* • *Coded in Python on Linux-based OS* • *Control over house appliances and interfacing with Open Source Media Center*
Robotics: (Dec 2013 – Jan 2015)	*Design, coding, and construction of an internet controlled robot used for autonomous sensing and navigation testing:* • *Coded in Python on Linux-based microcontrollers* • *Frontend: webpage coding in HTML and UI design* • *Backend: hardware interfacing and communication over WebSocket between the webserver and the local microcontroller.* • *Experiments in visual odometry using OpenCV and ROS (ongoing)*

Skills and Abilities:

CAD / FEA / CFD:	*SolidWorks (Motion & Simulation); Autodesk Inventor; XFLR5*
Programming Languages:	*Matlab, Simulink, Python, C++, HTML*
Prototyping:	*3D-Printing, Machining (Lathe, Mill, Power Tools), Composite Layups*
Software:	*Microsoft Office Suite, Windows and Linux*
Languages:	*Fluent in French and English / Basic German and Icelandic*