

Maximilian N. Kapczynski

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Education

Washington University in St. Louis – Expected Graduation: May 2015

- Candidate for Bachelor of Science in Mechanical Engineering

St. Louis, MO
2011-Present
GPA: 3.05/4.00

Technical Skills

Design/ Fabrication: Extensive 3D CAD Experience, CAM experience, CNC and Manual Machining, Composite Manufacturing, Heat Treatment of Metals, Electronics Prototyping, Soldering

Software: SolidWorks, MATLAB, Microsoft Office, Autodesk Inventor, Simulink

Communication: Native English Speaker, Fluent German Speaker, Basic Understanding of Spanish.

Work Experience

Mahe Medical GmbH - CNC Technician and Temporary Employee

Emmingen, Germany
Spring 2011

- I spent my time working as a CNC technician, as well as in the inventory office and in the quality control department.
 - Operated 5-axis machining centers, CNC Swiss lathes, and CNC grinding equipment.
 - Worked in quality control to enforce ISO 9001 and ISO 13485 standards.
- Manufactured bone screws and plates, and some specialty implants.

Weber Instrumente - Intern

Emmingen, Germany
Spring 2011

- Weber produces specialty hand tools for orthopedic surgery. I spent time working at each position at their small factory.
 - Worked to a high standard of quality. All parts were handmade and meticulously inspected.
 - Performed engineering office work, including inventory management and PDM.
 - Learned laser and TIG welding, fine polishing and surface work.

Karl Leibinger Medizintechnik - Intern

Mühlheim, Germany
Winter 2011

- This location housed the company's large and diverse medical device manufacturing operation. I was a formal member of their *Praktikum* program for two months; I worked in every division at the factory.
 - Began in the interns' shop and was formally trained in machine shop practices.
 - Rotated through each division. Assembled medical devices, gained experience in specialized processes such as micro-implant machining and bio-resorbable materials.

AAP Implantate AG - Intern

Berlin, Germany
Fall 2010

- My position at AAP was equivalent to an assistant CNC technician. I worked primarily on 5-axis milling machines producing bone plates and screws, as well as spine, knee and hip implants.
 - I was responsible for monitoring several machines, changing parts and monitoring cutting tools. Received cursory training in machine shop practices.

Independent Activities

Student Organizations

Formula SAE Student Team – Member

American Society of Mechanical Engineers Student Chapter – Member

Personal Projects

Mechanical Engineering Capstone – Designed a motorized solar panel to automatically track light sources.

Light Show Project – An ongoing project of about a year, I have built several analog music visualizers that filter and amplify an audio signal into a colored LED light show.

Robot Arm – Currently working with a colleague, we received a subsidy from our local ASME chapter to build a 6-DOF robotic arm to move a 1lb. payload. We designed robust and modular mechanical structures, including a 3-axis wrist. We specified all our actuators and controllers, and have placed a high priority on design for ease of manufacture.

Quadcopter – Received a monetary grant from the department to design and build a quadcopter capable of taking high quality aerial photo and video. Designed and manufactured a lightweight carbon fiber and polymer frame.

FSAE – Led a project to implement a sensor package for the car, to gather suspension and handling data. With these, I created a basic implementation of traction control. I also developed Arduino-based hardware to serve as a data logger.