

Gerardo Andrés Mazzei Capote

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OBJECTIVE

Full time employment in Mechanical or Manufacturing Engineering.
Strong interest in plastic additive manufacturing technologies.

EDUCATION

- **University of Wisconsin-Madison** - *Madison, WI, U.S.A* - ongoing
 - **Master of Science:** Mechanical Engineering. *Estimated graduation: August 2018.*
 - GPA: 3.813 on a scale of 4.
- **Universidad Simón Bolívar**- *Caracas, Venezuela:*
 - **Bachelor of Science:** Materials Engineering. *Graduated on June 2016.*
 - GPA: 3.9375 on a scale of 5.

SKILLS

Languages:

- Spanish: *Native language*
- Portuguese and English: *Advanced, near-native level*

Computer skills:

- Solidworks - *Proficient*
- MATLAB - *Proficient*
- Rep-Rap G-code - *Proficient*
- EES - *Intermediate*
- Microsoft Office - *Intermediate*
- Adobe Animate - *Intermediate*
- Origin - *Intermediate*
- R - *Basic*
- AutoCAD - *Basic*

RELEVANT EXPERIENCE

- Graduate Student** under Prof. Tim Osswald, UW-Madison **August 2016 - Present**
- Extruded a customized ABS filament with tight dimensional tolerances to achieve high precision volumetric output during 3D printing.
 - Used a customized 6-axis robotic printer to produce and test FFF coupons with unusual bead orientations.
 - Added custom geometries to 'SciSlice'- an open source, research focused slicing engine. ¹
 - Used a novel criterion to develop a failure surface for FFF parts.
 - Taught "ME370- Energy Systems Laboratory" to senior undergraduate students.
 - Managed the Additive Manufacturing Laboratory of the Polymer Engineering Center from August 2017 to May 2018.
- Chemistry tutor** Grupo Escalera, Universidad Simón Bolívar **August 2012 - August 2015**
- Implemented a variety of turnkey machining and automation solutions for both high-mix/low volume and high volume single product lines including automotive OEMs
 - Provided customers with on-site 3, 4, and 5 axis CNC operations training
 - Produced machine demonstrations and promotional videos
 - Demonstrated a strong ability to troubleshoot complex problems in the field and over the phone
- Manufacturing Engineer** short term contract Tempco Electric Heater Corp **April 2012 - August 2012**
- Upgraded permanent mold maintenance program
 - Reduced lead times for cast-in heaters by creating efficient mold changeover procedures
 - Performed root cause analysis on manufacturing defects
- Manufacturing Engineering Intern** Lexion Medical **May 2009 - September 2009**

continued

- Designed automated equipment to increase in house production volumes
- Fabricated, programmed, and implemented various automated machines
- Provided employee training on new equipment
- Installed, retooled, and performed initial operation of our first plastic extrusion line

Laboratory Supervisor

UW-Stout Machining and CAM labs

School Year 2006-2010

- Developed jigs and fixtures for classes and specialty projects
- Trained students on machining equipment and computer software
- Supervised laboratory facilities to maintain a safe working environment
- Produced specialized parts for instructors and laboratory equipment

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OTHER EXPERIENCE

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|---|---|----------------------------------|
| Air Transportation Specialist | Raytheon Polar Services, Antarctica | Oct-Feb 2010 - 2011 |
| <ul style="list-style-type: none">• Operated a variety of heavy equipment to load/unload aircraft and transport cargo• Assisted team members in safely and efficiently palletizing cargo• Maintained a positive attitude while working in harsh environmental conditions | | |
| Machinist | Advance Industrial Machine | May 2010 - September 2010 |
| <ul style="list-style-type: none">• Programmed and operated Mazak mills and lathes• Manufactured custom and short run parts from a variety of materials | | |
| Treasurer/Secretary | American Foundry Society UW-Stout Student Chapter | 2008-2010 |
| <ul style="list-style-type: none">• Designed patterns and core boxes to produce castings for other organizations• Researched materials and heat treating schedules to enhance mechanical properties | | |
| Assistant Foreman | Outagamie Co. Highway Department | Summers 2005-2008 |
| <ul style="list-style-type: none">• Coordinated labor and equipment for several multimillion dollar projects• Negotiated with customers to maintain positive relationships with the highway department• Communicated with sub-contractors to keep everyone informed of their duties• Consulted with independent inspectors to maintain quality workmanship | | |

PROFESSIONAL MEMBERSHIPS

- Society of Plastics Engineers (SPE)
- Society of Manufacturing Engineers
- American Foundry Society Student Chapter (AFS) **Treasurer/Secretary**
- Technology Education Collegiate Association (TECA) **President**
- **Eagle Scout**, Boy Scouts of America

LINKS

¹GitHub repository for Python tool path program - <https://github.com/VanHulleOne/SciSlice>
LinkedIn profile - www.linkedin.com/in/luke-van-hulle