Bruno Amorim

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Education

Purdue University — West Lafayette, IN **Aug 2017 — May 2021**

Bachelor of Science in Mechanical Engineering GPA: 3.14/4.00

Minor in Business Management

Technologies

- **Languages:** Python, MATLAB, HTML, CSS, JavaScript, CNC
- **Frameworks:** Flask, Bootstrap 5, Jinja2, Beautiful Soup
- **Systems:** Linux, Git
- **Software:** SolidWorks, Siemens NX, CATIA, Fusion 360, LabVIEW, ANSYS Fluent
- **Machine Controllers:** Fanuc 18i-T, Siemens 840D

Work Experience

Allison Transmission — Associate Manufacturing Engineer **June 2021 — Present**

- Resolved 20+ year old unit assembly issue via implementation of new tooling and a revised cutting program. Cycle time was reduced by 10% from 6 minutes to 5.5 minutes as a result.
- Integrated spline hob operation into production cell remove cell bottleneck as well as cut down on scrap produced by the previously used shaping operation.
- Developed highly modular cutting programs to rework transmission ground sleeves that would otherwise be considered scrap.

Allison Transmission — Test Engineering Intern **May 2020 — Aug 2020**

- Spearheaded restoration of a $3.5M one-off test bench used in evaluating prototype sun gears for oil fracking operations.
- Published several work instructions for standardizing operation of gear fatigue test benches to improve test department workflow.
- Utilized MATLAB to significantly reduce processing times for datasets collected over long time frames.

Allison Transmission — Operations Intern **May 2019 — Aug 2019**

- Oversaw day-to-day operations for manufacturing of hundreds of 3000 series transmission components.
- Reduced departmental expenses through establishment of a protocol that ensures grinder maintenance schedules are followed closely.
- Improved scrap rate through implementation of daily audits and close monitoring of component tolerances.

Projects

The Part Hub (theparthub.com) — Auto Parts Data Aggregation Web Application

- Developed web app that allows users to search for auto parts from a wide array of vendors.
- Utilized web scraping techniques to collect part listing information and store it to a MySQL database.
- Constructed backend using Flask framework and served it with NGINX to ensure quick server response.
- Integrated Bootstrap 5 to deliver a fast and responsive frontend for both mobile and desktop.

Recycreator — 3D Printer Filament Recycling Extrusion System

- Implemented MySQL database for writing and storing user-defined extrusion configurations.
- Created parameter table to ensure user-defined configurations do not exceed equipment safety limits.
- Generated factory configuration for use prior to product shipment and enabled users to restore product to factory configuration.