

Emerson Shuping

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SUMMARY

Mechanical Engineering Student looking to join a team that supports and teaches infield experience, industry best practices, and leadership standards

TECHNICAL SKILLS

Skills: Ansys Fluent, Ansys Fluent Meshing, Ansys Discovery, Ansys Mechanical, Computational fluid dynamics (CFD), Fluid flow simulation, CFD mesh generation, Mesh quality assessment, Boundary condition setup, Simulation initialization, Simulation post-processing, Geometry preparation, SolidWorks, Civil 3D, CNC machining, Welding, Machining, Power tool maintenance and repair, Equipment maintenance, Mechanical fabrication, Automotive repair, Engineering design, Shop floor layout optimization, Inventory management, Procurement, Subdivision plat design, Drainage design, Stormwater management, Drainage area calculations, Hydraulic inlet and pipe sizing, Construction engineering inspection, Land surveying, Deed and title research, Traffic signal and communications inspection, Workflow optimization, Workplace safety, Project coordination, Event planning, Community service coordination, Customer service, Cashiering, Food preparation and service compliance, Teamwork, Leadership

EDUCATION

University of Tennessee - Chattanooga

2028

Bachelor of Science (BS), Mechanical Engineering

UTC Brocks Scholars

Honors College

St. George's Independent School

High School Honors Diploma

GPA: 3.9

EXPERIENCE

University of Tennessee at Chattanooga

June 2026 – Present

ENME 1850 Engineering and Design Shop Manager

Chattanooga, TN

- Redesigned and optimized the shop floor layout to improve operational workflow, student accessibility, and workspace safety for Fall 2026 courses
- Serviced, repaired, and maintained power tools and shop equipment while evaluating replacement needs to support students in class work.
- Managed shop inventory and procurement by coordinating directly with faculty to order, tag, and organize tools, hardware, and raw materials.

W.H. Porter Consultants, PLLC

Civil Engineering / Construction Engineering Inspection / Surveying Intern

June 2025 – August 2025

Memphis, TN

- Civil Engineering- Produced subdivision plats to be approved by the appropriate municipalities and recorded with the appropriate local registries
- Designed swale for drainage paths (within 380 single family subdivision)
- Set spot elevations for building pads
- Calculated drainage area and created drainage tables to determine correct inlet drainage pipes, inlets, and stormwater detention sizes
- Construction Engineering Inspection- Aided in inspecting and maintaining traffic communication and signal upgrade
- Surveying- Completed deed and title research for TDOT roadway and bridge surveys

Grisanti's

Customer service/Cashier

2023 – Present

Germantown, TN

- Part of Grisanti restaurant team supplying local community
- Responsible for customer orders and transactions
- Managed inventory levels to ensure orders are setup to be met
- Ensuring proper customer service
- Adhering to company and state requirements around food preparation and service

Kappa Alpha Order

Community Service Chair

2026 – Present

Chattanooga, TN

- Responsible for scheduling and arranging community service events
- Tracked community service hours for all active members

PROJECTS

UTC Brocks Scholar Thesis (Thesis proposal in progress)

computational fluid dynamics, 3D printed surfaces

Currently working towards getting my honors thesis on computational fluid dynamics on 3D printed surfaces approved.

Introduction to Engineering and Design Class at The University of Tennessee at Chattanooga

engineering design, project coordination

The UTC Fencing Strip project aimed to design an accessible, cost-effective, and regulation-compliant fencing strip to replace the club inadequate practice setup. By analyzing transportation and storage logistics, our team developed a modular mat system that significantly reduced setup time while simulating professional competition conditions.

CERTIFICATIONS

Physics Setup in Ansys Fluent

Computational Fluid Dynamics

Mesh Generation using Ansys Fluent Watertight Workflow WTW

Computational Fluid Dynamics

Geometry Prep for Fluids Simulation in Ansys Discovery

Computational Fluid Dynamics

Solution Setup in Ansys Fluent

Computational Fluid Dynamics

Post Processing in Ansys Fluent

Computational Fluid Dynamics

Getting Started with Ansys Mechanical

Computational Fluid Dynamics

Best Practices for CFD Simulation
Computational Fluid Dynamics