

Erich A. Schimpf

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CAREER OBJECTIVE:

Mechanical Engineer interested in small arms manufacturing and development with a focus in non-standard weaponry, looking to leverage years of training and experience.

EDUCATION

Old Dominion University, Norfolk VA
BS, Mechanical Engineering Technology

December 2022

EMPLOYMENT

The AK Guy INC, Fayetteville NC

January 2021- Present

Part-time involvement in non-standard weapons engineering research and development

- Reverse engineered several small arms weapon systems
- Community relations manager responsible for donation-based platforms
- Generated \$2,000 in monthly donations
 - Managed social media community of 15,000 members

Ramsey Outdoor Store, Succasunna NJ

October 2017- Present

Full-time Firearms Sales

- Logged 60 firearms weekly for Acquisition & Disposition in the ATF bound books
 - Executed roughly a dozen weekly transactions in the hunting department
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INTERNSHIP EXPERIENCE

Brass Valley Initiative, Fayetteville NC

August 2019

Worked with the founder of AK Guy Inc, Brandon Herrera, in small arm developments on multiple AK pattern firearms.

- Led a multi-disciplinary engineering team tasked with updating the AK-50 design to conform with pre-determined design constraints
 - Spearheaded the design of several components related to a novel weapon design for AKG inc.
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SKILLS and INTERESTS

Machinist

- Demonstrated mechanical aptitude with both CNC and hand milling machines, lathes, and drill presses
- Broad understanding of mechanical tolerances, including tooling performance in various applications
- Taken courses and executed projects with injection molding, vacuum forming plastics, and laser cutting machinery
- Extensive experience in multiple additive manufacturing methods
- Entry level understanding of MIG and TIG welding

Computer Skills

- 10+ years experience using Autodesk Inventor (2020) and AutoCAD (2020)
- Moderate experience with SOLIDWORKS (2018)
- Proficient with Microsoft Office suite, G-code, and Autodesk 360 Fusion

Firearms

- Extensive knowledge and understanding of military firearm platforms, domestic and foreign
- Comprehension of various firearm operating systems of small arms
- Studied Soviet and Russian Federation small arms in-depth, exploring variants ranging from Kalashnikov concern production models to export models produced by other countries, and manufacturing methods and procedures

PERSONAL PROJECTS

Reverse Engineering

Reverse engineered the Soviet AS-VAL special-purpose suppressed assault rifle in 2019. Completed first firing prototype in May 2021.

- Created a design derived from online resources
- Explored and theorized operating methods from research, and designed functionally identical mechanical systems
- Performed stress simulations on designed components of the pressure vessel, such as calculating shear strength, and Hoop stress
- Determined appropriate materials for each component, along with accompanying hardness
- Created a unique method of cam track manufacturing and assembly, optimized to reduce the requirement for expensive machinery
- Developed 3D-printable stamping dies used to successfully stamp thin-walled components
- Wrote mechanical drawings for the manufacturing of all components in the system, along with determining appropriate tolerances
- Assembled fabricated components for test firing

As of June 2021, approximately 20 rounds have been successfully fired through the system, currently addressing and modifying existing parts to further polish function.

Additional information, pictures, and documents available upon request