

Joseph Spear

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EDUCATION

Purdue University <i>Master of Science in Electrical and Computer Engineering</i>	West Lafayette, IN	August 2023 - December 2026 GPA: TBD / 4.0
Austin Peay State University <i>Bachelor of Science in Engineering Physics</i> <i>Bachelor of Science in Computer Science</i>	Clarksville, TN	May 2021 GPA: 3.8 / 4.0

TECHNICAL SKILLS

C/C++	Linux – Bash	Mathematica
GCC / Make	Microsoft Suite	MATLAB / Octave
Python	Windows – PowerShell	R Studio
Java	Git / GitHub	LaTeX
Arduino / Raspberry Pi	Visual Studio	3D Modeling (Fusion 360)
ARM Cortex-M Assembly	Visual Studio Code	3D Printing (Ultimaker Cura)

WORK EXPERIENCE

VK Integrated Systems <i>Software Engineer</i>	Clarksville, TN	August 2021 – Present
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- Develop C and Assembly firmware for ARM Cortex-M4 based microcontrollers.
- Firmware development focuses on the improvement of the current VKIS systems, to include: bootloader design, audio signal analysis, bluetooth transmission, and motion tracking
- Modified and created Make files to update product build process using GNU development tools
- Create data gathering and analysis packages from provided specifications to gather, translate, and plot data from Bluetooth connected embedded systems

VK Integrated Systems <i>Embedded Systems Intern</i>	Clarksville, TN	May 2021 – August 2021
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- Engineer electronic hardware and firmware to solve challenges using AVR and ARM Cortex based Arduinos and Arduino IDE
- Wrote multi-threaded code in C++ for MBED real time OS on Arm Cortex processor
- Modified and created Make files to update product build process using GNU development tools
- Developed and performed test procedures to characterize navigation device performance

Publix <i>Produce Clerk</i>	Clarksville, TN	January 2020 – June 2021
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- Assisted customers with any questions or concerns they may have related to product
- Monitored the produce department and always maintained a minimum of 90% floor stock

Austin Peay State University <i>SLA Leader</i>	Clarksville, TN	June 2017 – May 2021
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- Worked with 10 to 15 students per class, helping to solidify concepts presented by the instructor.
- Enhanced students understanding in mathematics (calculus and algebra) and Sciences (physics)

Austin Peay State University <i>Governor's School Mentor</i>	Clarksville, TN	June 2019
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- Provided guidance to students in topics relating to computational physics, numerical analysis, and introduction to artificial intelligence

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COLLEGIATE LEADERSHIP & INVOLVEMENT

Omicron Delta Kappa

Spring 2019 – Present

Sigma Pi Sigma Physics Honor Society

Fall 2018 – Present

Pi Mu Epsilon Mathematics Honor Society

Fall 2018 – Present

Golden Key Honor Society

Fall 2017 – Present

Honors Program

Spring 2017 – May 2021

Student Government Association

September 2016 – May 2021

- *Chief Justice*
- *Associate Chief Justice*
- *Justice*
- *Freshman Senator*

April 2020 – May 2021

April 2019 – April 2020

April 2018 – April 2019

September 2016 – May 2017

August 2017 – May 2020

President's Emerging Leaders Program

September 2016 – May 2020

Kappa Alpha Order

- *President*
- *Vice President*
- *Philanthropy Chairman*
- *Brotherhood Co-Chairman*

December 2018 – November 2019

November 2018 – January 2019

November 2016 – November 2017

August 2017 – November 2017

VOLUNTEER SERVICE

Muscular Dystrophy Association Camp

Nashville, TN

May 2018 & May 2019

Food Initiative Clarksville

Clarksville, TN

2016 – 2019

For other work/non-work related projects, please visit <https://github.com/jspear16/jspear16>

Last updated September 9, 2023.