

# Joseph Spear

182 Cummings Creek Road, Clarksville TN, 37042 | (931) 220-3313 | joseph.spear98@outlook.com

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## **EDUCATION**

**Austin Peay State University**

**Clarksville, TN**

**May 2021**

*Bachelor of Science in Engineering Physics*

GPA: 3.8 / 4.0

*Bachelor of Science in Computer Science*

## **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 / Printing
ARM Cortex-M Assembly	Visual Studio Code	Wordpress

## **WORK EXPERIENCE**

**VK Integrated Systems**

**Clarksville, TN**

**August 2021 – Present**

*Lead Software Engineer*

- Develop C and Assembly firmware for ARM Cortex-M4 based microcontrollers.
- Developed firmware to interact with MEMS sensors such as accelerometers, gyroscopes, and magnetometers.
- 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**

**Clarksville, TN**

**May 2021 – August 2021**

*Embedded Systems Intern*

- 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**

**Clarksville, TN**

**January 2020 – June 2021**

*Produce Clerk*

- 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**

**Clarksville, TN**

**June 2017 – May 2021**

*SLA Leader*

- 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**

**Clarksville, TN**

**June 2019**

*Governor's School Mentor*

- 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

**President's Emerging Leaders Program**

**August 2017 – May 2020**

**Kappa Alpha Order**

**September 2016 – May 2020**

- *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 December 6, 2023.