

# Mary Iva (Anna) Knorr

Intelligent Systems Engineering Major – Physics Minor – Cybersecurity Minor  
Wilmington, North Carolina e-mail: mak7684@uncw.edu



## Skills:

### **Software/programming**

(Python, C, C++)  
Fusion 360 CAD  
Altium Designer  
Visual Studio  
MATLAB

### **Hardware:**

Soldering  
Arduino  
Raspberry pi  
3D printing

### **Soft skills:**

Critical thinking  
Excellent communication  
Time-management  
Strong interpersonal skills  
Public speaking

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**Education:** Current student at University of North Carolina Wilmington – GPA: 3.5  
Cape Fear Academy, Wilmington, NC – Diploma received in Spring 2022

## Research Experience:

### **Automated Foosball Table:**

Making a Foosball table with autonomous player 2 using computer vision to track ball and linear actuators/stepper motors for motion of rods. Used Raspberry Pi for the first iteration.

### **NSA Patent Challenge:**

Researching the patent on demodulation of unknown carrier phases for Automatic Identification Systems (AIS), finding improvements, and implementing them. Working with National Security Agency (NSA) mentors to collect resources otherwise unavailable to us.

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## Professional Experience:

### Engineering:

#### **New Potato Technologies, 5508 Business Dr, Wilmington NC**

**May 2025 - Current**

- Personally designed and developed three PCBAs for an industrial display module, including schematic capture, PCB layout, Bill of Materials (BoM). Participated in industrial display module testing.
- Assembled, booted up, and tested UR5e robotic arm for research product.
- Redesigned PCBA for a consumer product (coffee maker).
- Developed a custom Printed Circuit Board Assemblies (PCBA) test platform in Altium for consumer product (cosmetic device) manufacturing, enabling automated post-assembly testing and improving manufacturing efficiency and defect detection.
- Conducted component lifecycle analysis and sourced suitable replacements for obsolete parts, preserving design integrity and minimizing production delays for an industrial product.

### Administrative:

#### **Polar Ice Wilmington, 7201 Ogden Business Ln, Wilmington NC**

**Oct. 2023 - May 2025**

Hosted children's birthday parties, engaged customers, kept skaters safe on ice.

#### **North Carolina Ukulele Academy, 203 Racine Dr, Wilmington NC**

**June 2016 - Sept 2020**

Worked in the North Carolina Ukulele Academy as a store assistant, and as an assistant teacher.

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## Co-Curricular & Extracurricular Involvement:

**Homeschool Assistant:** Instruction in middle school computer science, physical sciences and astronomy topics.

**Active Clubs:** Leader of ACM Robotics sub-group, Member of ACM Computing Club, Member of Cyberdefense Club

**Cape Fear Academy Robotics Team:** Founding member, captain of the marketing team. Was also team captain.

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## Volunteering & Interests:

### **Cape Fear Star Party, Carolina Beach, NC**

Taught attendees astronomy equipment usage, star formations, and astronomy history