

PEDRO FISCHETTI

Camden, SC 29020 | (754) 214-1434 | ✉ PedroF@email.sc.edu |  [linkedin.com/in/pedro-fischetti-16bb8633b/](https://www.linkedin.com/in/pedro-fischetti-16bb8633b/) |  github.com/Fischetti22

Education

University of South Carolina <i>Bachelor of Science in Computer Engineering, GPA: 3.20</i> • Relevant Coursework: Data Structures & Algorithms, Embedded Systems, Signal Processing, Digital Logic Design	Columbia, SC <i>Expected December 2025</i>
USCG Federal Maritime Boarding Officer School <i>Secret Security Clearance (Active until 2027)</i>	North Charleston, SC <i>Dec 2020</i>

Experience

United States Coast Guard <i>Machinery Technician 2nd Class (Active Duty)</i> • Ensured operational readiness by maintaining and repairing complex engineering and electronic systems aboard cutters and stations • Managed the safe handling and transfer of hazardous materials during 2018 dry-dock availability (8,000 gallons of fuel oil, 330 gallons of lube oil, 660 gallons of coolant) • Diagnosed and resolved critical equipment failures, including heat exchangers, pumps, and regulators, ensuring mission continuity • Collaborated on navigation aid maintenance across Chesapeake and Delaware Bay, supporting vital marine transportation • Demonstrated technical proficiency beyond rank, overcoming shipboard discrepancies and ensuring seamless operations	Feb 2016 – 2023 <i>Various Locations</i>
Best Buy <i>Connections Manager</i> • Led 70+ member team through major industry transition, consistently exceeding \$100K daily sales targets • Developed comprehensive training programs that improved team performance and customer satisfaction	Aug 2013 – Dec 2015 <i>Coral Springs, FL</i>

Technical Projects

ArduinoGotchi - Tamagotchi Emulator <i>C++, Arduino UNO, SSD1306 OLED</i> • Developed full P1 emulator under strict memory constraints (32KB Flash, 2KB RAM) • Implemented custom Hardware Abstraction Layer and optimized LCD rendering with bit manipulation • Integrated Java-based ROM conversion utility for cross-platform compatibility	2024
IoT Multi-Display Task Manager <i>ESP32, WiFi, HTTPS, JSON APIs</i> • Engineered an IoT system managing three SSD1306 displays via I2C multiplexers • Implemented secure HTTPS API integration for real-time task synchronization and dynamic UI	2024
Home Server & IoT Hub <i>Raspberry Pi, Docker</i> • Built local server with Home Assistant, live notes, vegan cookbook, and educational game containers	2024
3D Printed Desktop Buddy <i>Fusion 360, Bambu Studio</i> • Designed and printed custom shells integrating soldered multi-display modules for dynamic interaction	2024
Healthcare Automation Script <i>Bash, CSV Parsing</i> • Automated staff competency tracking and compliance reporting, reducing manual workflows	2024

Technical Skills

Languages: C++, Python, JavaScript/Node.js, MATLAB, Java, Bash Embedded Systems: Arduino (UNO, ESP32, Nano, Mega), I2C/SPI/UART, memory optimization Tools: Arduino IDE/CLI, Git, NVM, Zsh, Fusion 360, Bambu Studio, LTSpice, Docker Frameworks: Adafruit (SSD1306, GFX, BusIO), U8g2, WiFiManager, ArduinoJson, Google Test Specialties: Digital logic design, signal processing, IoT development, 3D design, real-time systems Languages: Portuguese (Native), Spanish (Conversational), English (Fluent)	
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Leadership & Achievements

USCG Law Enforcement Operations <i>Certified Instructor & Firearms Coach Maritime Enforcement Leadership</i> • Directed complex maritime enforcement operations, recognized with multiple awards for operational excellence • Enhanced team operational readiness through advanced training program development	2016 – 2023
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