Yurii K.
Senior Embedded Developer

SUMMARY

- Master's degree in Power Plants with honors from National Technical University Kharkiv Politechnical Institute of Power Engineering, June 2018, demonstrating a strong academic background and technical proficiency - Designed modules for Raspberry Pi CM4, focusing on power management systems and implementing various technologies such as Gstreamer, Nvidia Jetpack, and Onvif for enhanced module functionality. - Optimized iwr1843 radar for metal detection, enhancing its capabilities in distance measuring and shape determination on surfaces using technologies like Microwave radar, IMX477R, and Coral TPU. - Developed sensors for smart home ecosystems to monitor household presence and activities, utilizing radar, MLX90640, and smart home technologies for effective embedded software solutions. - Expertise in power management systems, demonstrating advanced skills in designing and implementing robust power director systems for embedded modules. - Proficient in advanced radar system development, with a strong background in enhancing metal detection and implementing complex technologies such as Ballistic mathematics and SDR. - Skilled in integrating machine learning and radar data for smart home applications, focusing on innovative presence and activity monitoring systems. - Upper-Intermediate English

TECHNICAL SKILLS

Main Technical Skills	C/C++/C# (2 yr.), Python, MVC, Unix
Programming Languages	Objective-C, Python
JavaScript Frameworks	AngularJS
C++ Libraries and Tools	C/C++/C# (2 yr.)
Java Libraries and Tools	Spring Data
Data Analysis and Visualization Technologies	Data visualization
UI Frameworks, Libraries, and Browsers	CSS, Gstreamer
Cloud Platforms, Services & Computing	DigitalOcean
UI/UX/Wireframing	Affinity
Platforms	AlexMos, Nvidia, PCB, Raspberry PI
Mail / Network Protocols / Data transfer	Bluetooth, GPS
SDK / API and Integrations	Collections API

BlockChain and Decentralized Software	DeFi, Smart Contract
QA, Test Automation, Security	GUI testing
Operating Systems	Linux, Unix, Windows
Deployment, CI/CD & Administration	Microk8s
Methodologies, Paradigms and Patterns	MVC
Other Technical Skills	Ballistic mathematics, BluePill Board, boards, Coral TPU, FreeRTOS, IMX477R, IR data, JD-Gui, Jetson TX2, LoRa, LoRa Mesh, Mathematics, MAVLink, Microwave radar, MLX90640, Nvidia Jetpack, Object tracker, Onvif, PCB Design, PELCO-D, PID controller, PID regulator, Pixhawk, Quadrant photodiode, Radar data, Radio direction finding, SAP FI, SDR, SDR (Software Defined Radio), Smart home technologies, UPS, XRF 3D scene visualization, XRF object

WORK EXPERIENCE

Embedded Developer, Raspberry Pi CM4 Module Design

Summary: Design of modules for Raspberry Pi CM4, including power director design.
Responsibilities: Designing and implementing various modules for Raspberry Pi CM4 and power management systems.
Technologies: Gstreamer, GUI, object tracker, PID controller, Jetson TX2, Nvidia Jetpack, Onvif, PELCO-D, AlexMos

Embedded Developer, Iwr1843 Radar Optimization

Summary: Optimization of the iwr1843 radar for metal object detection, distance measuring, and shape determining on surfaces.
Responsibilities: Development and optimization of radar systems for improved metal object detection capabilities.
Technologies: Microwave radar, Ballistic mathematics, Raspberry PI, IMX477R, Coral TPU, object tracker, object detection, pixhawk, PID regulator, MAVlink, LoRa Mesh, PCB, UPS, GPS, radio direction finding, SDR, quadrant photodiode, PCB

Embedded Developer, Smart Home Ecosystem Sensor Development

Summary: Development of a sensor for smart home ecosystems, enabling monitoring of household member's presence and activities.
Responsibilities: Embedded software development and data handling for smart home sensors, focusing on presence and activity monitoring.
Technologies: Radar, MLX90640, BluePill Board, IR and radar data, XRF object, XRF 3D scene visualization, smart home

EDUCATION

- **National Technical University Kharkiv Polytechnic Institute of Power Engineering**
Received a master's degree with honours in Power Plants
June 2018