Selvababu Arikaran

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Languages: Tamil (Native), English (Fluent), Hindi (Conversational)

Professional Summary

IT Systems Engineer with 5+ years of experience in IT infrastructure management, automation, and software development. Proven expertise in deploying camera systems, developing Python-based automation solutions, and managing cross-functional technology projects. Adept at using tools like PyQt, OpenCV, and Camera SDKs to deliver practical, real-world solutions that enhance operations and user experience.

Professional Experience

IT Engineer
Digiphoto Entertainment Imaging LLC – Dubai, UAE
2020 – Present

- Managed end-to-end IT infrastructure, ensuring >99% uptime for imaging servers and deployments across global sites.
- Provided comprehensive Tier 1–3 IT support across hardware, software, networking, printers, barcode/QR devices, and media servers.
- Led **POS system configuration, deployment, and technical support** across retail and attraction environments; ensured seamless integration with camera and media workflows.
- Automated repetitive tasks via Python scripts, enhancing camera control, device tagging, media transfers, and system operations.
- Designed and deployed custom camera control systems (DSLR/GoPro) using Raspberry Pi and Windows, tailored for rides and attractions.
- Developed MDM-based device rollout strategies and supported mixed Wi-Fi/wired camera capture networks.
- Built PyQt5/PySide6-based desktop applications for media preview, tagging, and camera control panels.
- Integrated PLCs and network/web relay triggers for automated, sensor-based camera operations.
- Maintained enterprise-grade systems including Office 365, VMware, and Active Directory.
- Oversaw remote monitoring, patch management, and system updates for international deployments.

Certifications

- **Python Full Stack Developer**

- **ReactJS Frontend Development**
- **C Plus Plus Developer**

Key Skills & Technologies

- **IT Systems & Support**: Tier 1–3 Helpdesk, Active Directory (AD), Office 365, VMware, Hyper-V, NAS/SAN
- **Device & Infrastructure Management**: MDM (Mobile Device Management), Windows/macOS/Android/iOS Support, Server Imaging, **POS System Deployment & Support**
- **Networking & Security**: LAN/WAN, VPNs, Firewalls, Remote Desktop, Network Monitoring
- **Automation & Scripting**: Python, SQL, Shell/Batch Scripts, Automation Workflows
- **Camera & Media Tools**: DSLR Integration, GoPro API, CCTV, Slow-Motion Capture, Ride Photography Systems, FFmpeg, Image Tagging, Gesture Recognition, Video Rendering, Media Conversion, Face Detection
- **Custom Hardware & Integration**: Raspberry Pi, PCB Circuit Design, PLC Triggering, Relay Modules, Barcode/QR Code Printers
- **Sensors & Triggers**: Hands-on with retro-reflective, infrared (IR), and retro laser sensors for precise, automated camera control in dynamic environments
- **Software & GUI Development**: PyQt5, PySide6 – Modern GUI tools for camera control, tagging systems, and content preview
- **Monitoring & Support Tools**: ITIL Helpdesk, NinjaOne, Network Monitoring Platforms, TeamViewer, Remote Access Tools

Notable Projects & Achievements

- **GoPro Media Automation System**: Developed a custom Python application with integrated control boards for video capture, metadata tagging, and media synchronization, enhancing automation and reducing post-processing time.
- **Gesture-Based DSLR Capture**: Engineered a touchless DSLR photo capture system using TensorFlow and OpenCV. Deployed on Raspberry Pi and Windows for high-traffic environments, enabling efficient, hygienic image acquisition.
- **Patented LED Wall Capture Technology**: Co-invented and led the global deployment of chroma-based LED screen setups (green, blue, silver, white) for immersive photography environments across attractions in Singapore and UAE.
- **Slow-Motion Video Thumbnail Automation**: Built a Python tool using OpenCV and FFmpeg to auto-generate video thumbnails by detecting key subjects within the footage, significantly streamlining content review and archival.
- **Formula Rossa Ride Capture**: Delivered a high-speed, precision-timed image capture system for the world's fastest roller coaster, optimizing timing and clarity under extreme motion conditions.
- **Low-Cost Event Photography Platform**: Designed a school/event photography solution using Python and SQL, automating workflows and enabling efficient tagging and linking of captured media.

- **DSLR to Video Automation**: Created a pipeline that converts DSLR image sequences into stylized, high-quality videos, integrated with themed templates for use in theme parks.
- **Solar-Powered Timelapse System**: Developed an off-grid, solar-powered camera system with automated image capture, smart power management, and remote media syncing for daily timelapse photography.
- **Face Detection & Preview Tool**: Implemented an OpenCV-powered application that generates automatic thumbnails and indexes ride footage, improving post-capture workflow in media operations.
- **Wireless Camera Triggering via Web Relay**: Engineered a network-based relay system to remotely trigger cameras using HTTP commands, reducing cabling requirements and increasing reliability.
- **Relay & Network Trigger Integration**: Integrated PLCs and sensor-based relays to create precise, event-driven capture systems, especially for dynamic scenes and attractions.
- **Advanced GUI Tools for Media Ops**: Built real-time PyQt5/PySide6 applications for camera control, preview, and tagging, optimized for on-site production environments.
- **IT Infrastructure Management**: Managed IT systems for media deployments across multiple countries, achieving 99%+ uptime and seamless integration with NAS/SAN, remote access, and virtualization tools.
- **POS Systems Deployment & Support**: Rolled out and maintained point-of-sale systems across retail and imaging counters, ensuring barcode printer integration, local server communication, and minimal downtime.

Education

Diploma in Mechanical Engineering
2011 – 2014