Ivan V. Bondarenko

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Education

The University of Pittsburgh, School of Computing and Information	Pittsburgh, PA
Bachelor of Science in Computer Science	April 2024

Major: Computer Science
Concentrations: Mathematics, Operating Systems, Machine Learning

Work Experience

Siemens Mobility (North America)	**Pittsburgh, PA**
Mobility Development Program (MDP) – ATS-B Software Engineer	January 2025 – current

- Developed the PCAP-Analyzer cross-platform command line tool to analyze and debug TCP/Modbus packets between PLCs and ATS Servers - with report generation and Machine Learning network anomaly detection
- Lead Software Engineer & Cloud Architect for ATS Merge/Expansion Cloud Platform for NYCT/MTA, automating the merging and expansion of CBTC equipped and ATS controlled territories using a web-based application that interfaces with distributed version control systems and other ATS Expandability Tools

Mobility Development Program (MDP) – Onboard Software Engineer   June 2024 – December 2024

- Developed the EngiScan program which extracts text from CAD drawings and Engineering Manuals and utilizes Machine Learning/Vision technology to query and relationally map files in a PostgreSQL database
- Developed embedded software products for ATC I/O, Decoder, S12-Ethernet printed circuit boards' (PCB) microcontrollers, onboard the Siemens Rolling Stock (RS) S200 Light Rail Vehicle (LRV), for Greater Cleveland Regional Transit Authority (GCRTA) and Metro Transit (St. Louis) customers
- Debugged and tested ATC/ACSES systems using PTE, BTE, UTF, and software products (SimACSES, CABView), using oscilloscopes, multimeters, waveform generators, and flash programmers, following standardized testing procedures and documents

Magnasell Technology Solutions	**Erie, PA**
Software Engineer	January 2021 – January 2023

- Further developed magnasell.com, adding proprietary business software and introducing automation and e-commerce to the business (using HTML, CSS, JavaScript, PHP, and Python)
- Setup and maintained Linux Servers (Ubuntu 20.04, 22.04), PostgreSQL databases, and FTP servers, using local hardware and Cloud resources from Google Cloud Platform (GCP)
- Developed a proprietary cross-platform desktop application to process preowned devices in bulk (by USB) with built-in database, website, label printing, and barcode scanner support (using Python3 and tkinter, a Tcl/Tk GUI toolkit, and the Zebra Technologies Scanner SDK), increasing processing time efficiency by 900%
- Electronic hardware and software repair, involving micro-soldering

Innovative Systems, Inc.	**Pittsburgh, PA**
Software Engineering Intern	September 2022 – December 2022

- Worked with the internal development team and large clients to fix relevant issues and implement new features for FinScan and DataProfiler products, using powerful tools such as JIRA and git (version control)
- Created REST endpoints and API for FinScan to handle transactional notifications
- Introduced to and worked with new technologies including C#, .NET Core, React (JavaScript), and Microsoft SQL Server

www. ivanbond.tech	**Pittsburgh, PA**
Software Engineer	January 2021 - current

- Created a Full-Stack Web development agency to help small local businesses transition, automate, and/or implement custom technology solutions, locally or online
- Created websites using WordPress (LAMP - Linux, Apache2, MySQL, PHP) and the Django (Django, NGINX, uWSGI, and MongoDB or PostgreSQL) web frameworks with SSL/HTTPS encryption
- Setup Linux server hardware infrastructures to host required business applications