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## **Summary:**

Seasoned Software Engineer and Architect with expertise in Artificial Intelligence and Machine Learning. Proven track record in leading projects, managing cross-functional teams, and scaling complex systems. Strong background in finance, government contracts, and intellectual property, including work on patents.

### **Experience:**

Burleon Tech 2021 - Present

#### Sr. Software Engineer/Medical Devices

 Provide medical device development and architecture, including designing user interfaces. Handle all technical and operational tasks, utilizing Python; ARM-based CPU, using the Reduced Instruction Set Computing (RISC) architecture; and GPIO pins for connecting sensors, LEDs, and motors; working with Internet of Things (IoT); and focusing on real-time data acquisition. Simultaneously handled regulatory compliance and patent issues.

Worlwin LLC 2009 – Present

### Founder/Lead Developer

- Lead developer and architect for a range of established firms and startups, such as <u>Calonex</u> property management, building their website, payment gateway, and mobile app; <u>Department of Information Technology and Telecommunications (DoITT) of New York</u>, developing an IT management system to visualize, inventory, and structure data center components for streamlined operations; <u>New York Advocates for Sexual Health (NYASH)</u>, creating features allowing users to research medical topics, search for healthcare jobs, and browse detailed profiles of medical facilities; <u>MediaKonnect</u>, building a mass messaging broadcast system to deliver time-sensitive notifications and updates to users concurrently; as well as a multitude of others in a range of industries.
- Implemented and maintained National Automated Clearing House Association (NACHA) file processing for ACH transactions, enabling secure and automated bank-to-bank payments for payroll, vendor disbursements, and customer billing. Developed interactive web-based dashboards using D3.js to visualize complex datasets with dynamic charts, graphs, and real-time data updates. Restructured MySQL databases, including implementation of master-slave clustering, to improve performance, scalability, and meet client-specific high-availability requirements. Developed PHP-based web tools using Smarty templating engine, guiding users through intuitive interfaces and improving overall site usability.

- Worked closely with the <u>United States Patent and Trademark Office (USPTO)</u>, handling end-to-end process of trademark registrations, including branding creations, USPTO application submission, and follow-up to ensure successful registration and protection of intellectual property.
- Provided services to startups, including fractional C-level leadership; technology leadership, including architecture and design services, including database optimization and software creation; vendor and client acquisition and management; technology research and roadmap, and product management.
- Led an OCR modernization project, leveraging <u>neural network design with PyTorch and TensorFlow</u> to enhance accuracy and performance using contemporary Machine Learning techniques.

### **Bank of New York Mellon Corporation**

2001 - 2025

#### Application Manager, Sr. Principal Developer, Sr. Vice President

- Led a number of engagements, including <u>NEXEN</u>, a fintech platform for bank's services, including data analytics, a web application, and APIs; Alternative Investments for internal and external utilization; and cloud infrastructure, responsible for continuous delivery and deployment. Provided full development life cycle, along staff and Project management.
- Steered Generative AI efforts, utilizing publicly available Large Language Models to build and train own agent to reside as an augmentation layer to create tailored solutions for specific business needs, engaging a self-service model to avoid centralized bottlenecks. Employed Retrieval-Augmented Generation (RAG) to enhance domain-specific queries' accuracy and relevance of responses. Facilitated <u>CoPilot</u> integration and established a strategic partnership with <u>OpenAI</u> to enhance AI competencies.
- Used cloud platforms including AWS and Azure to build a Centralized Content Delivery platform, with <u>Akamai NetStorage</u> as the backend for storing and serving static assets. Migrated 100+ white-label apps to <u>Akamai's Enterprise CDN</u>, offloading 95–99% of traffic from internal servers. Developed APIs and integrated them into CI/CD pipelines to automate asset deployment, extending the architecture to the entire portal to improve performance and reclaim internal resources. Utilized <u>GitHub</u> and <u>GitLab</u> for source control, and implemented <u>Jenkins</u> pipelines for continuous integration, testing, and deployment across multiple environments.
- Offered extensive mobile development efforts, leading development of the mobile portal
  infrastructure, including security, content delivery, and app store engagement, including
  production support. Engaged <u>Cue-me by Openstream</u> for hybrid iOS and Android apps,
  Swift for iPhone and iPad; Java for Android apps; and JavaScript, HTML and CSS for
  cross-platform engagement.

- Created Enterprise Web Services with SOAP to connect all internal processes, including all legacy schemes to distributed systems, using <u>Apache Axis</u>. Applied the WebLogic Portal, along with Java, Spring, Spring Boot, Lucene, <u>Hazelcast</u>, REST, C++ with GDB, DB2, JavaScript, Typescript, Angular, HTML, CSS, as well as <u>Form.io</u>, <u>Chrome DevTools</u>, and Selenium, along with a wide array of scripting languages for a range of Alternative Investments, Reporting, Client Onboarding, Customer and Al apps.
- Led the design and development of a firm-wide reporting system, reducing report batch load times by 93%, from 8–16 hours to 1 sec–2 hrs. Redesigned and consolidated the nxn-iframe architecture by merging multiple fragmented components into a single, reusable module. Integrated dynamic iframe resizing to support responsive content delivery and implemented a keep-alive mechanism to enhance session reliability and user experience across embedded applications.

#### Raytheon Systems Company(RSC)

1997 - 2001

### **Software Engineer/Optics**

- Ported old plotting package from VMS FORTRAN to DEC Visual FORTRAN
- Created masks for lens fabrication (PC, GDSII Format using L-Edit)
- Involved in software development process, deliverable software, and critical paths (UNIX, C++)
- Organized development and production work environments for AO projects (UNIX)
- Automated code builds with shell scripts and makefiles
- Hubble Space Telescope (HST/NGST) data analysis. (PC, MSVC++, DEC FORTRAN, UNIX)
- Software development for adaptive optic (AO) projects (UNIX). One of two Sr. software engineers at completion of project. Over 500,000 lines of code maintained (C++, RPC, UDP, TCP/IP.) Conducted training course on system
- Written manuals for software
- GUI development under UNIX
- Developed Java network communication products that connected server (C) that controlled a RTOS (VxWorks) running on Solaris (SOCKETS). (UNIX)
- Used VB to create a document parser. Connected to Access 97 database, Created stored and dynamic queries

## Technology Service Corporation (TSC)

1994 - 1997

#### **Member of Technical Staff**

- Sensor Analysis (UNIX, C++, Matlab, Xpatch, other modeling software)
- Ported Radar Imagery Generator (RIG) from VAX/VMS environment to SUN/Solaris (FORTRAN)
- Software Development (UNIX, C++, GUI development, analysis tools, graphic database visualization, and MT GUI applications)
- Attended a X Conference in NYC. Enrolled in GUI building seminar using Motif
- Model Database construction for sensor analysis (UNIX, USGS)
- Wrote users manual

- Responsible for modeling targets
- Responsible for writing deliverable software

# **Education:**

Pace University

Andrews University

MS Computer Science
BS Computer Science

# **Hobbies:**

Acting (live and film), Piano performance, Photography, Drawing