John Barclay Walsh

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Education

- **The Pennsylvania State University (Cumulative GPA: 3.83)** — University Park, PA
  B.S. in Information Sciences and Technology (4.00/4.00) — *Aug. 2011 – May 2016*
  B.A. in Film/Video Production (3.97/4.00)

Experience

- **Bundok Industries** — Houston, TX
  Principal Consultant — *Jan. 2022 – Present*
  - Founded the LLC as a partnership and manage day-to-day operations
  - Conceptualized and developed a handheld device interfacing with the client's roll profile measurement devices, in two versions: a Windows tablet-based version that works in tandem with the client's existing software, and a fully-custom version using Raspberry Pi CM 4, which completely replaces the interaction with the measurement hardware and enables new measurement technologies to be integrated to meet customer needs
  - Utilized Nuxt.js, TypeScript, ApexCharts, WebSerial, and Electron in the development of the tablet's software, enabling a single codebase to run on existing machines, the Windows tablet, and the custom version of the hardware, enabling the client to develop once while supporting several customer use cases and price points
  - Developed a C# WinForms-based utility to automate data synchronization between the new tablet and the client's legacy desktop software
  - Manufactured a variety of custom cables for a client
  - Wrote a modern plotting software component to replace a client's aging dBase and Delphi-based software, using C#, WPF, and OxyPlot, improving performance and enabling compatibility with diverse display resolutions and orientations; the software is architected in such a way that it can replace components of the legacy software incrementally over time, as the client's budget permits
  - Patched multiple security vulnerabilities in a client's PHP-based website, enhancing their digital security posture
  - Acted as a regional representative for a client, enhancing relationships and providing valuable insights on regional needs and trends, through on-site sales, support, and training visits

- **PRO-MIC Corporation** — Remote
  Part-Time Developer/Architect & Systems Engineer — *Feb. 2017 – Jan. 2022*
  - Designed and developed an IR thermometer solution for staff entry temperature checks, in response to the demand surge during the COVID-19 pandemic
  - Established a company VPN, enabling increased remote work capacity, especially useful during the pandemic
  - Orchestrated a zero-downtime migration from obsolete hardware for the company's file, web, and email servers
  - Managed the company's IT infrastructure remotely with occasional onsite maintenance
  - Created video tutorials, product photography, and product literature
  - Enhanced data durability, improved website performance, and reduced costs by devising and implementing a hybrid AWS-on-prem architecture

- **ZIBRIO** — Houston, TX
  Lead Software Developer — *Oct. 2020 – Dec. 2021*
  - Led development for the BalanceCoach mobile app (iOS and Android), utilizing Xamarin/C# that enables users to track and manage their balance health by recording and syncing relevant data and offering guided workout routines
  - Wrote Bluetooth LE communication logic to facilitate communications between the mobile app and ZIBRIO's Stability Home/Pro balance scales
  - Developed the BalanceCare web app using React to assist healthcare providers with patient evaluation, enabling the generation of personalized reports and suggestions for improving patients' balance health
  - Integral in the filming of Better Balance Training videos, enhancing the product's content and user experience
  - Spearheaded a successful livestreamed event, including planning the A/V setup, running several cameras, the sound, and controlling live feed with OBS

- **Pariveda Solutions** — Houston, TX
  Senior Software Consultant — *Jul. 2019 – Sep. 2020*
  - Devised and implemented custom solutions for clients across multiple sectors, primarily focusing on AWS-based new and migrated cloud applications, with experience in Azure and Salesforce
  - Assisted in developing a cross-platform mobile application using Xamarin, featuring Bluetooth LE connectivity and a cloud-hosted backend
  - Constructed an AWS-based backend for a client project using the Serverless Framework, incorporating data storage, analysis, and an API
  - Architected and developed an AWS version of a Java EE application, originally based on GCP, making it cloud-agnostic and drafting the AWS connector implementations
  - Authored Python scripts to automate deployment and tasking procedures
  - Established several automated CI/CD testing and deployment pipelines using AWS CodePipeline w/ CodeDeploy, Jenkins, Azure DevOps, and CircleCI
  - Designed and developed a healthcare application that leveraged AWS Transcribe & Comprehend Medical to enhance patient-provider interactions, serving as a virtual scribe and sending collected data to the patient's Epic profile

- **Pariveda Solutions** — Los Angeles, CA
  Software Consultant — *Aug. 2016 – Jun. 2019*
  - Architected a serverless cloud platform hosted on AWS for a custom solution that identifies anomalies in vendor invoices, increasing review capacity from <20% to 100%
  - Served as the Tech Lead for a team developing a serverless case management solution using ReactJS, hosted on Amazon S3 and backed by DynamoDB via API Gateway endpoints
  - Managed and expanded Jenkins CI/CD pipelines for a large-scale, AWS-based cloud project
  - Developed a client project progress tracking dashboard using JavaScript, NodeJS, D3, jQuery, HTML5, and CSS3
  - Developed tracking pixel verification and self-healing software using JavaScript, NodeJS, AWS Lambda and Kinesis
  - Developed a Salesforce and Vlocity-based enrollment application and workflow for a major retail energy client

- **PRO-MIC Corporation** — King of Prussia, PA
  IT Systems Administrator and Web Developer — *May 2009 – Apr. 2016*
  - Revamped the company's website twice in 2011 and 2016, enhancing the online interface
  - Programmed an online store utilizing PHP, MySQL, and JavaScript
  - Repaired electronic circuit boards
  - Designed and assembled a fanless, solid-state industrial all-in-one computer system
  - Designed and deployed a long-range industrial Wi-Fi network for a client
  - Managed web servers, workstation computers, and the internal server system
  - Designed and implemented a VOIP phone system

- **Alcoa, Inc.** — Pittsburgh, PA
  Global Business Services – Information Services Intern — *May 2015 – Nov. 2015*
  - Developed a product filtering system for the company website using ASP, JavaScript, SQL, C# and .NET
  - Transitioned existing web analytics to Google Analytics
  - Developed web-based tools to streamline internal business processes
  - Enhanced site content by leveraging the Instagram API
  - Authored both end-user and developer documentation for assigned projects

Skills & Certifications

Certifications: AWS Certified Solutions Architect (Associate); Salesforce EPC/CPQ

Selected Technologies: JavaScript/TypeScript, React.js, Nuxt.js, Vue.js, jQuery, D3.js, ApexCharts, OxyPlot, HTML, CSS, C#, .NET, Objective C, Java, SpringBoot, Swing, PHP, Python, ASP, VBScript, MSSQL, MySQL, PostgreSQL, NoSQL, JSON, YAML, AJAX, C/C++, LaTeX, OAuth, Salesforce, Vlocity, Bluetooth LE, Serial Over Bluetooth, RS-232, ElasticSearch, Arduino, Raspberry Pi, Windows, macOS, Linux, iOS, Android, Xamarin, AWS, Azure, CI/CD (Jenkins, CodePipeline/CodeDeploy, CircleCI, Azure DevOps), Git, AI/ML, electronic hardware development, CADD, far-field microphones, computer networking (on-prem & cloud, esp. AWS)

Industry Experience: Automotive, Consulting, eCommerce, Entertainment, Information Technology, Healthcare, Manufacturing, Oil & Gas, Professional Services, Research, Retail Energy, Transportation & Warehousing