

Robert Cook, Jr.

Synopsis: My focus is on developing software that can improve lives and transform interactions in the world. I enjoy working closely with a team to build things that make people smile and solve problems that are often thought too difficult to undertake.

Work Experience **Principle Engineer** April 2019 - Present
Everactive Charlottesville, VA

Involved in all aspects of the Everactive backend systems including time series data ingest, gateway setup and management, and the RESTful API. Introduced "specification first" methodology using OpenAPI 3.0 to define API endpoints and produce public API specifications. Architected and developed the backend API used by the Everactive client application (Insights) as well as by other application developers using the public API specification. Added unit and end-to-end tests to the API implementation and introduced continuous integration tests to the development process. Worked on a team to move time series data from OpenTSDB to TimescaleDB as well as moving ingest process from using Nifi to Kafka. While at Everactive, backend systems went from 10's of sensors to > 20000 sensors reporting readings every minute.

Technologies / Services used: Typescript (NestJS), Go, Python, Kotlin, Kafka, TimescaleDB, Postgres, DataDog, AWS, Terraform, Gitlab, GitHub, MQTT, AMQP, Vue, ReactJS

Senior Software Engineer August 2014 - April 2019
3Advance Charlottesville, VA / Washington, DC (remote)

Developed, delivered and supported multiple Android mobile applications and back-end API applications. Applications provided functionality across many industries and interests including collecting and reacting to sports-related statistics, two-sided markets (restaurant ordering), large-scale near-field communication (NFC) data collection to determine construction site worker timesheets, detecting beacons (Bluetooth Low Energy) to give location-specific information and replacing the text messaging app on Android phones. Implemented continuous integration, git processes for code review and merging to increase consistent delivery across iOS, Android and Web clients.

Technologies / Services used: Java, Kotlin, JavaScript, AWS, GitHub, Azure Hosting Services, .net (c#), SignalA (Android SignalR client), TestFlight, Crittercism, Crashlytics, Bluetooth 4.0 (BLE), TeamCity, CircleCI, TravisCI, REST, GraphQL

Android Developer May 2013 - April 2019
Fanamana Inc Charlottesville, VA

Developed the Android Fanamana Baseball application. The application uses social media for account management (Facebook, Twitter), Websockets (SignalR) to get real-time score and on-deck information, as well as standard web service connectivity to interact with back-end API.

Android Developer January 2014 - August 2014
WillowTree Apps Charlottesville VA

Developed and delivered multiple Android applications for a variety of clients and industry groups including social networking, entertainment and media organizations, sports team and facility groups, and commerce. Worked closely with clients, designers, iOS developers, and testers to deliver quality native Android applications that gave the best experience to users across multiple mobile platforms and devices.

Dependent Technologies Developer

October 2010 – December 2013

University of Virginia (UVA) Enterprise Applications

Charlottesville, VA

Lead developer on dependent technologies team with an emphasis on maintaining and enhancing the document imaging system used at UVA. Major accomplishments: re-wrote document conversion (TIFF to PDF and vice-versa) processes to be more efficient (reduced document load time from days to hours); implemented pessimistic locking to fix product bug causing data loss; modified javascript-based batch scripts to use common libraries; implemented logging and error notification processes; imported two million HR documents from legacy system; created administrative web-based application (MVC 4.0) to simplify common administrative tasks such as controlling workflow settings for undergraduate admissions process; and modified document type mapping for the HR solution.

Software Engineer

June 2007 – October 2010

University of Washington (UW) Office of Research

Seattle, WA (Charlottesville, VA)

Worked remotely as a developer and team lead on the UW System to Administer Grants Electronically (SAGE). SAGE is a web-based application that manages the application, award, and post-award processes for all grants and contracts at the UW. Collaborated with business analysts and end users to identify and implement new features, re-architected the middle-tier business layer to consolidate business rules and improve performance, reorganized database schema for reporting purposes, implemented new automated testing (unit and GUI-based), and resolved production support issues.

Software Developer III

August 2006 – May 2007

SNL Financial

Charlottesville, VA

Senior developer on the team that maintained and enhanced the SNL Interactive web application. Responsibilities included: implementing specifications using the .net 2.0 framework, mentoring junior developers, and creating and implementing new coding standards.

Technical Staff

May 2005 – August 2006

DatStat Inc.

Seattle, WA

Developed and maintained an online survey system. Responsible for web application development and integration with web service backend. Helped re-architect the web application for managing surveys, participants, and email jobs. The application allowed analysts to create queries to analyze collected data and generate reports based on queries. Web application used XML, XSLT, .net framework 1.1 (C#), javascript, and CSS.

Created an API to interact with backend systems sold as an add-on software development kit (SDK). The API allowed organizations to customize and extend the core application functionality. Also wrote and maintained the SDK help documentation.

Senior Application Systems Engineer

June 2001 – May 2005

University of Washington Computing & Communications

Seattle, WA

Application developer on multiple USER (University Systems Renewal) Projects. Responsibilities included gathering business requirements, determining development timelines, architecture design and implementation, and documentation. Projects included: Integrated Time & Leave (web-based time collection system); Online Work/Leave System (web-based leave accrual system); Employee Self Service (W4, direct deposit, leave balance checking); Online Payroll Update System (re-wrote web application to solve database deadlock issues, and modified DHTML interface to make application cross-browser/cross-platform).

Developer
ZAAZ Inc.

May 2000 – May 2001
Seattle, WA

Developer for a web consulting company creating websites for a variety of clients. Project work included teaming with strategists, designers, producers, and clients from project initiation to completion to produce websites that provided an improved web experience for site visitors.

Senior Computing Specialist
University of Washington Computing & Communications

Apr 1998 – May 2000
Seattle, WA

Worked in the Payroll and Personnel department to move paper time reporting systems online. Projects included maintaining a C based cgi program used to maintain time reporting, an ASP, SQL Server 7.0 based authorization utility, and an n-tier Department of Retirement Services reporting system that used SQL Server 7.0, J++ COM objects, and ASP.

Computer Programming Instructor
Tacoma Community College

Sept 1995 - Apr 1998
Tacoma, WA

Organized curriculum and taught University of Washington certified C programming and FORTRAN 77 classes at Tacoma Community College. Problem-solving skills, algorithm implementation, and top-down design were emphasized in both classes.

Education: University of Virginia

M.S. Materials Science and Engineering
B.S. Chemical Engineering

Personal:

Track & Field Olympic Trials Finalist in the 3000m steeplechase.
Three-time World Cross Country Championships USA Team Member.
Rode tandem bicycle with wife from Virginia to Washington (4000 miles). We're still married.
(<http://mrcook.crazyguyonabike.com/>)
Hobbies include mountain biking and photography.