
Edmund M. Sullivan
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URL: <http://chickenwing.software>

Skills

Programming Languages: Swift, Python, Objective C, JavaScript, C/C++, Java, C#/.NET, PHP, Scheme, Tcl/Expect, Visual Basic, assembly.

Platforms and Frameworks: iOS, MacOS, Django, React Native, Android, UNIX/Linux, Windows.

Other Technologies: HTML5, CSS, SQL, NoSQL.

Consulting Experience

Consulting Experience

I founded Seashore, my software consulting company, in September 2006. Below are some representative projects. Full portfolio available at <http://chickenwing.software>

Cutting Edge Streaming Video App: <https://divx.com>

DivX

January 2019–May 2019

- Developed code in React Native, Objective C, and Swift for an iOS app.
- Developed code in React Native and Java for an Android app.
- Wrote iOS and Android code for advanced video recording and streaming capabilities.
- Implemented support for WebRTC.

Innovative Fantasy-Football/Collectibles App: <https://hashletes.com>

Hashletes

August 2018–January 2019

- Developed code in React Native, Objective C, and Swift for an iOS app.
- Used GraphQL to synchronize a large, dynamically changing, database of player data and statistics.
- Collaborated as part of a fully distributed team across multiple timezones.
- Worked on an elegant, beautifully animated user interface using React Native.

iOS fitness app: <https://www.evolvehealth.io/>

Evolve Health

- Bootstrapped the iOS development environment using the Swift language, The Parse platform, and modern mobile technologies.
- Created a natural language processing library for voice recognition.
- Implemented a beautiful and dynamic user interface design.
- Wrote a large percentage of the shipping code, available now on the App Store.

Custom MacOS sales app

Acadia Shutters

August 2016–present

- Developed code in Objective C for an app for sales reps to use on customer premises.
- Implemented complex multithreaded routines to enable background network synchronization.
- Implemented custom-designed user interface components.

Social network incentive framework

Loop Lingo

- Worked with multiple online merchants to allow them to incentivize and track sharing of purchases and links on social networks.
- Designed and developed software in Python and Django, with Bootstrap, JavaScript, and AngularJS on the front end.
- Integrated with Facebook, Twitter, and Google Plus.

- Set up a high-availability and scalable site using Amazon Web Services.

Desktop video conferencing software

NexTalk

- Designed, developed, and maintained desktop software in C++ for the Windows platform, using COM and DirectX.
- Created a reliable SIP client supporting modern audio and video codecs, including VP8 and G.711 and H.264.

Usability testing software

NIST / Usability Works

- Designed and developed desktop software in C# and .NET for A/B testing of prototypes.
- Provided for data collation and export to Excel.

Suite of guitar reference apps for iOS, Android, MacOS, and Windows

Guitarator Toolbox <http://guitarator.com>

- Allows looking up chords and scales for guitar or any stringed instrument, in any tuning. Reverse Chorderator provides for “reverse” chord lookup.
- Windows app in C# and .NET.
- Android apps in Java using the Android SDK.
- iOS and MacOS apps in Swift and Objective C.
- Web-apps developed in Python and JavaScript
- Allows looking up chord charts and scale charts for guitar or any stringed instrument, in any tuning, provides for “reverse” chord lookup.
- Available for purchase and download. I also developed the online store in Python/Django with PayPal integration.

C++ Systems software

Digital Cove Interactive

- Created a high-performance SMTP client and server to run in a high-load Linux environment, for an email processing system.
- Implemented subscribe and unsubscribe functionality.
- Implemented DKIM authentication to verify the email sender is not a spammer.

Employment Experience

Employment Experience

Senior Firmware Engineer

Gemstar / TV Guide Onscreen

June 2004–September 2006

- Designed and wrote embedded real-time software in C for an electronic program guide (EPG) for televisions, DVD-recorders, DVRs, etc.
- Developed graphical debugging tools in C# .NET using advanced features such as remoting and multithreading.
- Worked directly with multinational customers to integrate the TV Guide Onscreen EPG into their products. As Lead Engineer for several integration projects, participated in on-site meetings and weekly international conference calls.
- Designed and developed an automated test suite in Python and C#.

Senior Software Engineer

Juniper Networks (formerly Unisphere)

September 2001–January 2004

- Designed and developed embedded software in C and C++, using the VxWorks RTOS.
- Worked on control processor software for the following network protocols: Sonet, Ds3, Ds1, HDLC, and Ethernet.
- Designed and implemented low-level device drivers, worked to bring up and debug new hardware, including PCI controllers, network interface controllers, and custom FPGAs and ASICs.
- Worked on system-level software for redundancy, hardware monitoring, CLI interaction, and software download.

Software Engineer

Starent Networks

January 2001–June 2001

- Developed software in C, C++, and Perl for a Linux platform as part of a startup company creating the next generation of high-speed mobile wireless infrastructure (3G wireless).

- Designed and implemented the system startup sequence and dynamic task creation sequence for a large-scale, carrier-class networking product.
- Designed and implemented a software simulation environment on the Linux operating system, to simulate the entire software system on a desktop PC.

Software Engineer Level Two

Arris Interactive (formerly part of Nortel Networks)

June 1999–December 2000

- Developed embedded software in C, C++, and assembly (MIPS and PowerPC) for DOCSIS 1.1 broadband cable devices (data and voice over cable television lines). Worked as part of a multi-site team developing large-scale carrier-grade equipment.
- Ported a large base of software from the Nucleus Plus embedded operating system to VxWorks 5.4.
- Designed and developed low-level device drivers for Broadcom and Texas Instruments controller chips.
- Developed a suite of automated test scripts written in Tcl on a Linux server, utilizing Netcom Smartbits network testing devices.

Teaching Assistant

Harvard University Extension School

September 1998–February 1999

- Advanced-level C++ programming class.
- Taught 30 students for one hour per week, graded projects and tests, and held office hours to assist students with assignments.

Intern

MERL – A Mitsubishi Electric Research Laboratory

June 1998–June 1999

- Research and development of electronic devices: Self-describing Building Blocks. Project was presented at Siggraph 2000.
- Created a graphical application in OpenGL and Visual C++. Developed embedded software in PIC Assembly Language.
- Named as co-inventor for two patents.

Education

B.S. in Computer Engineering, May 1999. Pertinent course work: Communications Systems, Advanced Microprocessor Architecture, Data Structures in C++, GUI design, CMOS VLSI Design, Digital Logic Systems.
Tufts University

Overall GPA: 3.6 out of 4.0