Eddie Lau

- Full Stack Software Engineer with 20+ years' experience
- 10+ years mobile app development experience

Independent Software Contractor
2011 - Now

Job Duties
- Project and team management
- Software architecture design
- Mobile app UX design
- Mobile app development (iOS and Android)

Projects for UXAP (US company), 2017-Now
- Onboard Client Apps – An Ionic based cross platform sports team management client
- Onboard Server – Node.JS server with content management and billing control
- PhoneNotes Call Recorder – Automatic phone calls recording app with transcription
- PhoneNotes Call Recorder Server – Scalable Node.JS server with call and billing control

Projects for PGN (US company), 2011-2017
- Blast - Platform to provides the latest updates and quick official guides for events
- First Touch - Team management and team collaboration platform with features such as IM, calendar, photo gallery and announcement
- RapnTok - Mobile voice communication

Individual iOS developer
2008 - Now

Apps on store
- Speech to Text for WhatsApp – Top download in 2018
- Cantonese Keyboard - Cantonese input method for iOS 8
- PopSend - Cloud based file transfer app
- NewsSurfer - HK Newspapers browser, top download iPad app in 2011
- CloudSurfer - Web browser, Featured app on US app store in 2011
- Touch Bibles - Series of bible readers, top downloads in 2008
- Touch eBook - Ebook reader, top downloads in 2008-2009

Customer projects
- uHub - Cloud storage platform for PCCW
- Chinese Daily Bread - Bible study platform for the Scripture Union of HK
- Arsenal ASC - Official app for HK Arsenal fan club

Job Duties
- Project and team management
- Software architecture Design
- Mobile app development

Mobile app projects
- Wifi VoIP mobile phone
- SIP VoIP desktop phone

Award
Outstanding Performance Appreciation Award

General
- Enhanced team productivity by designing scalable and clean software architecture
- Successfully shortened the software development cycle of embedded system by enabling x86 simulator
- Improved software quality and lower the maintenance cost by continuous refactoring
- Built up competent team from server development to embedded development and to mobile development
- Successfully led the team to archive the team goals and delivered commercialized products
- Managed overall software integration, creating builds and release management for all projects
- Setup and administrated team forum, source code cross referencing tools, nightly build system on Linux
- Built cross platform build system for all projects base on GNU build tools

E-book technologies - E-readers running on Android based dual screen ebook devices
- Designed dual screen architecture of the ereader
- Implemented e-ink rendering driver
- Designed and implemented reflow algorithm for ePub on Android thru Webkit
- Refactored e-reader components for 2nd generation e-reader
- Designed and implemented drag and drop framework for 2nd generation e-reader
- Implemented user interfaces for 2nd generation e-reader
- Involved in user experience design and architecture design

Mobile Peer-to-Peer Technologies - Multimedia content sharing and searching app on Symbian and Android phones
- Designed and implemented photo viewers and music player app on Symbian
- Designed the content sharing HTTP server architecture
- Implemented the Web based content sharing management user interface
- Designed the NAT traversal solution for home-cloud sharing

- Mobile Social Networking Technologies - Facebook on MID
- Designed Facebook client library for Linux MID
- Designed and implemented the offline cache of Facebook database
- Implemented m.facebook.com client library to enable adding friend on MID

- Designed and implemented the user interfaces of mobile Facebook application
- Integrated WebKit and Pidgin to enable Adium themes for Pidgin
- Implemented adding friend mechanism on WiFi Adhoc network

Mobile Internet Device (MID) - Maemo based tablet device running on ARM platform
- Implemented the VoIP user interface in Python
- Ported the VoIP platform to Maemo with easy to use API
- Ported the open source (Wengo) video phone to Nokia N810
- Designed the Adobe Flash plugin architecture for MID browser
- Integrated the Maemo input method engine (IME) to Adobe Flash

Korean Wifi VoIP Mobile Phone - Wifi Phone interops with Korean tier 1 carrier
- Designed architecture for integrating Korean input method to Wifi phone
- Developed Korean input method
- Implemented SMS text transcoding between UTF-8 and EUC-KR encoding
- Redesigned and developed the power management module to minimize the power consumption
- Further reduced the boot up time by performing profiling

Boingo Wifi Hotspot VoIP Mobile Phone - Wifi Phone with Boingo hotspot access capability
- Designed architecture for integrating Boingo library to Wifi phone
- Ported Boingo library, HTTP library with SSL support to ColdFire uClinux platform
- Developed prototype of C-binding interface for Boingo library for ease of integration
- Hardened the Boingo thread module to avoid uClinux threading issue
- Resolved firewall and NAT problems by implementing hotspot session manager
- Improved user experience and reliability by Implementing server existence detection
- Successfully licensed the software platform to Elite Giant Wireless Technology

Wifi VoIP Mobile Phone - Wireless SIP phone running on m68k ColdFire uClinux platform
- Successfully built the prototype in 3 months and demonstrated in CES
- Ported the core architecture, GLib and HALs to ColdFire platform
- Resolved thread bug in uClinux by implementing thread-pool
- Designed and implemented mobile features such as power management and over-the-air firmware upgrade
- Optimized system performance such as user interface response time and power consumption
- Resolved hang problems by implementing deadlock detector and Wifi firmware reset mechanism
- Fixed memory problems by integrating malloc-debug library
- Fixed interoperability and inter-networking problems by analysing networking protocols in detail
- Successfully led the team to get through the software instability crisis
- Licensed the software platform to Elite Giant Wireless Technology for product WIFI-Phone CP300, and GSL for product WF100
- iSipPhone VoIP Desktop Phone - SIP phone running on MIPS Infineon Linux platform
- Ported the MVC architecture and HALs to MIPS platform
- Integrated and harden asynchronous DNS library, NTP library and the DHCP library

- Licensed the software platform to Kingtronics for product ATL Berkshire IP5000, and Avantec for their VoIP products

Video Phone Prototype - SIP based video phone running on x86 Linux platform with H.264 video
- Designed scalable Model-View-Controller (MVC) based architecture
- Integrated 3rd party H.264 codec
- Successfully completed the prototype in 2 months

EMX Platform Software Library - The foundation library for the EMX SIP IP-PBX
- Built scalable application framework which support pluggable module and single thread event driven model
- Designed and implemented the data to XML/database mapping framework for persistent data abstraction and module configuration
- Made the library highly portable by introducing a OS abstraction layer and utility libraries
- Built the SIP stack including the SIP transaction manager, SIP parser and SIP transport manager as pluggable modules
- Successfully built the platform software library as the foundation of all later projects development as such as EMX Proxy Server, Media Server, Profile Server, iSip Phone, Wifi Phone and Boingo Wifi Phone
- EMX Voice Mail Server - Voicemail server with IVRS capability
- Designed and implemented JSP based voicemail server as host of VoiceXML scripts
- Designed and implemented voicemail Java based user profile manager as abstraction of IMAP server
- Designed and implemented extension of VoiceXML as JSP Tag Library for voicemail retrieval and user profile management
- Integrated IVRS engine called OpenVXI, a VoiceXML intepreter for the voicemail server WISE Web Service Creation GUI - Web services orchestrating tool
- Second to the development team of Pervasive Web Technology group for 3 months
- Designed and developed Java based GUI for web service workflow creation with drag-n-drop user interface
- Designed and developed extensible framework for the GUI

<div align="center">Freeware</div>

GimmeFive - Freeware for Palm OS http://gimmefive.palmidea.com/
- Developed a handy tool for Sony TH55 PDA to simulate the user experience of 5-way navigator of Palm PDA Thousands of downloads within 1 month

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Senior Software Engineer
TradeCity CyberSoft (HK) Ltd
2001 - 2003

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SeeWaa Financial System - Consultancy Service
- As a consultant of a large information technology company located at Shanghai to provide training, technical consultant service and project management for the development of a J2EE financial system, specifically in the security control sub-system and the reinforcement of coding quality

RexIP AppServer - Implementation of J2EE AppServer

- Successfully led a small team of 2 developers to implemented EJB container standard Session Beans and Entity Beans
- Designed and implemented load balancing support for Session Beans
- Designed and implemented redundancy support for Session Beans
- Implemented Transaction Manager (JTA) and Database Connection Pool (JCA, JDBC) which supports common databases including Oracle, MySQL and PostgreSQL
- Optimized the performance of JSP/servlet to outperform JRun, Orion and Resin
- Built up strong expertise of J2EE and J2SE technology
- Provided a WebLogic training to a HK Logistic company
- Successfully licensed the AppServer to Fujisu for a B2B portal and PCCW for the Fixed-Line SMS service

RexIP JDO - Implementation of Java Data Object (JDO)

- Successfully led small team of 2 developers to implement the standard of Java object persistence in 2 months
- Supported common databases includes MySQL, Oracle, PostgreSQL
- Prepared downloadable software package including 100+ pages programming guide, tutorials and sample codes RexIP Visual Java - Java Web workflow server with GUI Development Tool
- Designed and developed a graphical workflow editor with drag-n-drop user interface
- Assisted development of workflow engine hosted on Tomcat server

Technician
The Department of Information Engineering
The Chinese University of Hong Kong
1998 - 2001

BroadMedia - Multimedia Deployment and Authoring Tool for video streaming, lecture on demand and multimedia web deployment

- Designed and developed web based ActiveX player using the MFC framework which support synchronized playback of unlimited types of media
- Designed extensible architecture for adding plug-ins of different types of media playback
- Implemented plugins for MPEG-1, generic AVI, QuickTime, Flash and PowerPoint
- Successfully supported Netscape browser by implementing Netscape plug-in to contain the ActiveX player
- Successfully reduced the size of player by migrating from MFC to ATL
- Realized web embedded WYSIWYG HTML authoring by implementing Microsoft HTMLEdit component as ActiveX control
- Prepared downloadable shareware package with 5 stars rating
- Built up expertise in Microsoft technologies such as ATL, OLE, COM, Internet Explorer
- Successfully licensed to PCCW for a Multimedia Portal called 4D Movie
- Successfully acquired by company HK-ITech and spun off to HK-ITech

Publication

- A System for Authoring, Distributing, and Presenting Multimedia Contents over the Internet. ICMCS, Vol. 2 1999: 62-66

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System Programmer
Advance Telesoft Limited
1997

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Paging System

- Developed the message bus inside the paging system for a large Tele-Communication Company in Hong Kong

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Bachelor of Science
Department of Computer Science and Engineering
The Chinese University of Hong Kong
1994 - 1997

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Xaw95 - Opensource Project for X-window

- Developed a widget library based on open source project called Xaw3D to simulate the user interface of Windows 95
- Widely used on Linux platform