

Mahmoud Al-Qudsi

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Full-spectrum (firmware to web and everything in between) senior engineer and inventor with 15+ years of development and team-lead experience looking to have fun solving hard problems.

Education

MEng eq in Computer Engineering
2009 Jordan University of Science and Technology

Work Interests

Concurrency primitives, library design and development, low-latency or high-performance tuning, zero-cost abstractions, distributed or parallel computing, low-level OS integration, open source, virtualization, security research, embedded, reverse engineering, and more.

Technologies

OS dev (Win32, Posix, Linux, FreeBSD, macOS), desktop/backend (C, C++, C#, rust), cloud (AWS, Azure), embedded (firmware dev, peripheral drivers, ARM, STM32, Atmel, Raspberry Pi), mobile (iOS), virtualization (VMware, EC2, lambda, firecracker, Hyper-V, etc), containers (docker, custom zfs-backed formats, and others), SQL and dbadmin (PostgreSQL, SQLite, CockroachDB, MySQL), web backend (bespoke C/C++, rust, ASP.NET and .NET Core, PHP), web frontend (HTML, CSS, JavaScript, TypeScript, WASM, node), networking (L2, L3, wifi, PoE, VPN), audio-video muxing & coding (ffmpeg, raw mpeg/h264/h265), kernel hacking (Linux, FreeBSD, Windows), machine learning (Matlab, Python), and more.

Achievements and Accomplishments

Invented a low-cost braille display (Patent US20130203022A1), author of EasyBCD (100 million+ downloads), fish-shell maintainer, ported iMessage to Windows, discovered and published critical security vulnerabilities, featured in PC Magazine, PC World, and others.

Personal Interests

Research into curricula and education, non-profit advocacy, camping and the great outdoors, reading, writing, youth volunteering, automobiles, photography, and more.

Language Skills

Native/fluent in English and Arabic, intermediate French (oral and written), basic Spanish (oral and written).

Experience

NeoSmart Technologies | Technical Founder
2011 - present

Headed development of B2C and B2B software in the disaster recovery space, which involved heavy reverse engineering of Windows internals, the production and distribution of a custom BSD-based live recovery environment, and all the plumbing to support the product and its web-enabled dependencies. Oversaw and combined work of disparate remote development teams.

Independent Consultant | Senior Engineer
2012 - present

Contracted with various companies and startups to lead or help in bringing greenfield projects to the market or overseeing rewrites of legacy tech to adopt modern and cloud solutions. Responsible for evaluating competing technologies and deciding on smartest path forward, creating library/backend skeleton, and implementing core components.

Open Source | Various Capacities
2010 - present

Worked in various capacities ranging from BDFL to core maintainer and individual contributor on various open source projects. Strong passion for sharing code and strong believer in being a positive force for good. Became adept at version control, remote development, code review, technical writing, and onboarding new colleagues.

Geniesoft | Senior Engineer
2007 - 2011

Desktop development team lead, headed rewrite of legacy backup software to modern C++ and responsible for hiring, onboarding, code review, and evaluations. Responsible for evaluating tech stack migration options and realizing massive gains to backup runtimes. Wrote a more efficacious replacement for rsync algorithm still in use today.