

MATTHEW VAUGHAN

Software Engineer

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EXPERIENCE

Software Consultant

App Lighting LLC

📅 11/2018 - Ongoing 📍 North Andover, MA

My personal LLC for providing software consulting and engineering services through various online platforms

- Provide efficient, timely, and cost-effective Android, iOS, e-commerce, telecommunication, and customer engagement solutions to small businesses and individuals
- Serve as architect and lead for larger contracts and subcontract additional designers, developers, artists, and marketers as needed

Independent Contractor

Focus EduVation

📅 10/2019 - 03/2020 📍 Woburn, MA

Offers a portfolio of services to enable online learning for businesses and universities

- Provided assessment materials, derived from lectures, for online courses educating students of information technology and/or data science.

Associate Member of Technical Staff (Software Engineer II)

Salesforce (by aquisition of Demandware)

📅 10/2015 - 11/2016 📍 Burlington, MA

World leader in CRM with an inclusive corporate culture

Aquired Demandware in 2015 for \$2.9B

- Implement security and platform features for a world-class SaaS e-commerce product (DemandWare) with thousands of enterprise tier clients (Kate Spade, ADIDAS, iRobot, Starbucks) and users in the hundred of millions

Research Assistant

Tufts University

📅 01/2015 - 05/2016 📍 Medford, MA

Selective "right sized" university in Medford, Massachusetts

- Design declarative portion of a nano pass compiler in SML/NJ based on Andy Keep's work
- Implement a byte code executing virtual machine with parallel and concurrent generational garbage collection in C
- Target C, JVM, LLVM, and x86_64 ASM as output languages for compilers

Software Engineer

International Business Machine (IBM)

📅 01/2014 - 01/2015 📍 Littleton, MA

Monolithic employer of 300,000 with a hundred-year history gambit spanning product portfolio, among the few engaging in basic research

- Implement and test user interfaces for enterprise order management system (used by Target, Best Buy, Walmart, etc)

Database Manager

Phoenix Technologies (by aquisition of Touchstone Software)

📅 02/2006 - 12/2008 📍 North Andover, MA

Software giant ubiquitous with BIOS

Acquired Touchstone Software in 2008 for \$18M

- Keep DriverAgent database of drivers up-to-date with most recently released hardware drivers for all Windows OS
- Write PHP scripts to automate process and generate reports

EDUCATION

B.S. Computer Science minor Mathematics

University of Massachusetts - Lowell

📅 2010 - 2013

GPA
3.9 / 4.0

Ph.D. (Incomplete)

Tufts University

📅 2015 - 2016

GPA
3.7 / 4.0

STRENGTHS



Entrepreneurial spirit

Managing my own business for the last four years, utilizing self made **Twilio** docker containers running **Tomcat** with **Scala** in a functional paradigm, leveraging **Google Api**, **Google Cloud**, and **AWS** for rapid and reliable deployment



Microservices

Employing **docker** containerized microservices for web servers, databases, middleware, and **REST** API fulfillment



Full Stack

Working for eight years as an engineer and consultant (Touchstone Software, Phoenix Technologies, IBM, Demandware, Salesforce, App Lighting LLC) in Java, **Scala**, **Node.js**, and **PHP** stacks with Apache, Nginx, Tomcat, and Django servers all with HTML, CSS, JQuery, Velocity, Dojo, and React front ends



E-Commerce and Order Management

Developing **DemandWare** platform and implementing **Sterling** order management user interfaces



Leadership

Subcontracting as many as four additional engineers to support larger contracts



Written and verbal communication Skills

164 verbal **GRE** score, top 33% for Harvard accepted English PhD students



Top 2% IQ

Mensa qualified



"Photographic" memory

Perfect scores on delayed (<0.1%) and intermediate recall (<5%) and **Eidetic** memory indicated by **BVMT**

SKILLS

Languages (years)

PHP(12)	Java(6)	C(8)	C++(5)	HTML(12)	JavaScript(12)
CSS(10)	Haskell(2)	Scheme(3)	SML/NJ(3)	Scala(4)	JSP(5)
Node.js(4)	JSON(11)	XML(11)	Python(3)		

Tools

Git	Jenkins	Bash	SSH	Virtual Box
VMWare Workstation	Linux	RDP	AWS	Docker
Kubernetes				

Databases and servers

Oracle	MongoDB	Tomcat	Apache	Nginx	OpenSMTPd
Django	Express				

Headaches I'm Used To

CORS	XSS	SSL	Legacy code	Race conditions
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PROJECTS

Telepath

📅 10/2020 - Ongoing

5g headset that reads your mind (see AlterEgo MIT Media Lab) to act as a substitute for smartphones, no screens required

- Hardware consisting of wearable bone conduction materials or (in theory) vocal fold augments and cochlear implants
- Runs on Android Wearable and supports a (theoretical future) ecosystem of third party apps

Research

📅 Ongoing 📍 <https://mind.contact>

Mathematics of Thought

- Developed math formalisms for "thoughts" given a directed graph of "neurons"
- Demonstrated how these graphs could be used to simulate Turing machines, hence, how neurons could simulate Turing machines

Voicemail Replacement and Appointment Scheduler

📅 08/2019 - 10/2019 📍 <https://thenshow.me>

Voicemail and appointment scheduler replaces your existing voicemail forwarding number and allows callers to schedule appointments

- Using phone forwarding codes (like Google Voice does), you replace your current voicemail number with a Twilio number
- Callers reach your mailbox with an option to "leave a message" or "book an appointment"
- You receive an SMS containing the transcript of the voicemail, or appointment details
- Integrates with google calendar