

Terrence Y. Chay

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CAREER SUMMARY

- 20+ years experience as full-stack and front-end software and site-reliability engineer with a specialty in building scalable, secure web-based products and architecture that are built to ensure rapid viral growth (>7 billion page views/month) and generate revenue. (ex. Automattic/WordPress)
- 7 years managing engineering teams large and small (up to 30+ direct reports) from strategy to execution, leading by example. (ex. Wikimedia Foundation/Wikipedia)
- Accomplished speaker/teacher. Has presented 25+ talks and keynotes at conferences such as OSCON (7x speaker), International PHP Conference and DEMOmobile.

EXPERIENCE

Head of Engineering at **Clara Health** (San Francisco): 2018 – October 2020

- Managed all engineering including hiring and career development at a pre-Series A startup through post-Series A
- Built out replacement back-end API and analytics platform (GraphQL, OpenAPI 3, NodeJS/Koa/Typescript, Redis, Redshift, Elasticsearch) which replaced original (custom ReST, Python/Django, Zappa/Lambda)
- Owned site operations and HIPAA-related site security responsibilities (AWS, Cloudflare, Terraform/Terraform) including HIPAA-compliant release infrastructure (Gitlab/Gitlab CI, Elasticbeanstalk, AWS VPC)
- Created virtual development environments for local development (Vagrant, Ubuntu, Ansible)
- Various engineering/IT-related SOP documents and budget decisions including title and compensation tiers

Principal Engineer at **Raise.me** (San Francisco): 2017 – 2018

- Architected, designed and wrote a Netflix-style recommendation engine powering Raise.me's college suggestion API in Go, Ruby and Python; deployment using AWS (EC2, RDS, ElasticBeanstalk), XPlenty and NewRelic
- Estimated, planned and resourced engineering to meet Web Content Accessibility Guidelines (WCAG 2.0) for the web site before certification deadlines
- Designed and implemented a standardized virtual development environment for the engineering team using Vagrant integrated with existing Chef provisioning
- Other development in Ruby on Rails, React/Redux, MongoDB and Bootstrap
- Created and managed Architecture Change Control initiative, which uses a well-defined process to evaluate all engineering projects in context of impact on architecture and software structure; this significantly opened up engineering velocity and infrastructure integrity at the organization, unburdening the CTO from being a bottleneck
- Directly managed two sprint teams of engineers on critical engineering projects

CTO & Cofounder at **Tinker** (San Francisco): 2015 – 2016

- Built live beta website from scratch and handled everything from spinning up the servers to architecting the site and writing the bulk of the backend code and frontend UI (DigitalOcean, Vagrant, Ansible, NginX, PHP, MySQL, Memcache, AngularJS, Material Design)
- Recruited and onboarded additional engineers to support the project and dev site (Git, Vagrant, Ansible)
- Engaged in business development to get lighthouse accounts on board to test the beta; users included teams from Pinterest and Wikimedia Foundation

Director of Features Engineering at **Wikimedia Foundation** (San Francisco): 2012 – 2014

- Grew the features engineering team from 15 to more than 30 engineers
- Quadrupled the product release schedule for features engineering from 2 release per year to 8 releases per year in one year's time
- Oversaw fundraising engineering team, which grew in individual donation revenue to \$44M in 2013, a 83% increase from 2011
- Oversaw and drove the release of major features products that contributed to editor engagement, including Visual Editor, notifications, and onboarding experiments for first-time users

Planet Taker at **Automattic** (San Francisco): 2009 – 2012

- Added domain purchasing/mapping to signup and registration: Doubled revenue of WordPress.com; mentioned by PCMagazine (<http://www.pcmag.com/article2/0,2817,2089365,00.asp>) when ranked “Best Blog Software”
- Created A-B Testing framework for WordPress.com
- Created Twitter API for WordPress
- Revised Global Tags pages (source of ad traffic and GooglePageRank), enabled on JetPack for WordPress.org users
- Migrated Major League Baseball from competitor to WordPress and Google Knol from Google to WordPress
- Created Auto-activation on signup
- Created Writing Helpers, Guided Tour, and other things First Time User Experience

Software Architect at **Tagged** (San Francisco): 2007 – 2009

- Solved site stability and scalability issues allowing virality curve to grow site from 18 million to 90 million registered users in ~1 year
- Rearchitected site performance, allowing a growth from 830 million to 5.5 billion monthly pageviews while reducing the web server count in half
- Built the most popular dating application on the web in order to increase site engagement, generating over 87 million page views, 17 million yes clicks, and 2.2 million matches every day
- Transitioned development from a waterfall release system (6 releases in 2006), to an agile one (27 releases in 2007), to a web-agile process (daily releases).
- Oversaw ~20 engineers. Rebuilt codebase, team structure, work culture, and development process to reduce engineering churn from 100% a year when joining the company to <10% while the team more than doubled in size.
- Lead company to 14 straight months of profitability in the middle of an economic downturn (since April 2008) and multiple success metrics:
 - Top 80 website worldwide (Alexa, since November 2008, up from #320 in December 2007)
 - #3 social network in advertising market share (HitWise, November 2008)
 - #3 largest overall social network in the United States (Nielsen NetRatings, December 2008)
 - #3 and fastest growing social network in the United States in total daily users behind MySpace and Facebook, (comScore Media Metrix, February 2009)
 - #3 and fastest growing social network in the United States in time spent on site per user behind MySpace and Bebo (comScore Media Metrix, February 2009).

Web Applications Engineer & Scientist at **Plaxo** (Mountain View): 2004 – 2007

- Created Plaxo eCards website as a revenue product in the fall of 2006. This sent over one million eCards and generated a quarter of million dollars in sales in the first month of operation and helped close Plaxo’s second and final round of funding (before being sold to Comcast in 2008 for \$175M). This is an Ajax site written in PHP that seamlessly integrates into a heterogeneous non-PHP back end.
- Implemented Plaxo web client, including architecture of web-based Calendar, Tasks and Notes (Ajax, Remote Scripting) and introduced Ajax to Plaxo (2004). Originally attached to product design, helped create web engineering team from one person (me) to seven people (2007).
- Implementing next corporate website including g11n support and content management.
- Designed and implemented survey and reporting engine (2005)

Previous job history available upon request.

SKILLS

Web Applications Development (Applications, Languages & Frameworks)

- Ajax, Apache, Bootstrap, CacheGrind, CSS, Django, GraphQL, HTML, HTTP, Javascript, JQuery, JSON, NginX, OpenAPI 3, React/Redux, REST, Ruby on Rails, Serverless

Development Ops

- Ansible, AWS (EC2/S3/ElasticBeanstalk/ElastiCache/Redshift/RDS/Route53/VPC/Lambda/SES/SQS), Chef, CruiseControl, DigitalOcean, Terraform/Terragrunt, Vagrant, VirtualBox

Software Languages

- PHP, Javascript/Typescript, Ruby, Go, Python, C

Software Applications

- CouchDB, ELK (Elasticsearch, Logstash, Kibana), Git, MySQL, memcache, MongoDB, Oracle, PostgreSQL, Redis, SQLite, Subversion

EDUCATION

- **University of Illinois at Urbana-Champaign (UIUC)**, M.S. Physics [1999]
- **California Institute of Technology (Caltech)**, B.S. Physics [1994]

PRESENTATIONS & PUBLICATIONS

Conference Presentations

"The Recommendation Engine" **Confoo, Montreal**, March 2019, **Sunshine PHP, Miami**, February 2019, **RaiseMe Offsite, San Francisco**, November 2017

"PHP without PHP" **Confoo, Montreal**, March 2019, **International PHP Conference, Berlin**, May 2009

"Frames: Inside the Challenges at Wikipedia" **php[tek], Chicago**, May 2014, opening keynote

"Ten Evil Things: Features Engineering at Wikipedia" **Northeast PHP, Boston**, August 2013, closing keynote

"Living Without Your Linemen: The Programmer Becomes System Operator in the Cloud." **PHPCon, Nashville**, April 2011, closing keynote **OSCON, Portland**, July 2011

"Tales of Virality." **OSCON, Portland**, July 2011

"Chinese Proverbs: High concept, high touch... and high tech." **php|tek, Chicago**, May 2009, keynote speech

"Making Frameworks Suck Less" **International PHP Conference, Berlin**, May 2009

PHP Meetup, San Francisco, November 2008, Sun Microsystems-sponsored **ZendCon, San Jose**, September 2008, Unconference

"The Fear and Loathing Guide to PHP and Basic Object-Oriented Design Principles" **Tagged Engineering Brownbag, San Francisco**, February 2009 **PHP Meetup, San Francisco**, February 2008, **International PHP Conference, Amsterdam**, May 2004, **PHPVancouver, Vancouver**, February 2004

"The Internet is an Ogre: Finding Art in the Web Architecture" **OSCON, Portland**, July 2008

Dutch PHP Conference, Amsterdam, June 2008, closing keynote **php|tek, Chicago**, May 2008, closing keynote

"PHP Scalability, Performance, and the Future." **ZendCon, San Francisco**, October 2007

geekSessions, San Francisco, January 2008, session organizer & moderator

"The Underpants Gnomes Strategy Guide: An eCards Case Study" **PHP Works, Atlanta**, November 2007, **ZendCon, San Jose**, November 2006, **OSCON, Portland**, July 2006

"0 to 60 in 45 Minutes: A down and Dirty Ajax Design Patterns Firedrill" **OSCON, Portland**, July 2006

"Building Liquid Web Applications with Remote Scripting" **OSCON, Portland**, August 2005

"Patterns by Example in PHP Web Applications" **PHP West, Vancouver**, January 2005 **OSCON, Portland**, July 2004

"The Wireless Home Attendant." **PHPCon, San Jose**, October 2003

"XML in Web Application Development." **DEMOMobile, San Diego**, September 2003

"Building the first travel search engine as a scalable web service." **SINA.com, Sunnyvale**, November 2000

Teaching

1995-1997 **University of Illinois at Urbana-Champaign** Engineering Physics

Awards:

Alpha Lambda Delta Award for Outstanding Teacher of Freshmen Scott Anderson Research Award (Spring '96, Fall '97)

Highest-rated teacher in department (Fall '95, Spring '96)

Publications & Research

Ceperley D., N. Goldenfeld, T. Chay, G. Bauer, E. Drager. "Prediction of **Macroscopic Properties of Liquid Helium from Computer Simulation.**" 1999.

Krieger D., R. Simon, T. Chay, and R.J. Scwabassi. "A **WAN surgical monitoring application built on PVM.**" *PVM Conf. Workshop*. Pittsburgh, PA. 3/1996

Chay, T. R., T. Y. Chay. "Effects of **Channel Blockers on Reentrant Arrhythmias: Model Study**". *IEEE Proc. Comp. Cardiology*. Bethesda, MD. 10/1994. pp. 245-248.

Krieger D., R. Simon, T. Chay, and R.J. Scwabassi. "A **WAN Surgical Monitoring Application.**" *Int. Conf. Biomagnetism*. Vienna, Austria. 9/1993.

KEYWORDS

APIs, architecture 4S (stability, scalability, speed, security), caching, creative, database, devops, engineering management, instruction, internet, Javascript/TypeScript, PHP, problem solver, program manager, quick learner, web application programming, web UI

References upon request.