Colton Hicks

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EDUCATION

Harvard University   Jun 2016
Pre-doctoral Research in Macroeconomics
Classes: Cambridge, MA
- Multivariable Calculus, Linear Algebra and Differential Equations, Psychology, Clinical Psychology

Brigham Young University   Dec 2012
Bachelor of Science, Molecular Biology   Provo, UT
Bachelor of Science, Business Management, Emphasis in Strategy
Minor in Economics
- GPA 4.0, Summa Cum Laude Graduate; ACT 33 (99th Percentile)
- Vice President of MUSA (Marriott School of Management student government)
  - Created and distributed the Official MSM Resume Template and Guide to improve school-wide student resume quality
  - Participated in planning and execution of multiple school-wide events and initiatives
  - Lectured at events with 450+ students in attendance
- Full tuition scholarship from Brigham Young University, 2008-2012
- Member of Phi Kappa Phi, nation's most selective, all-discipline honor society, top 10% of seniors, by invitation only
- Dean's List Honors, Top 5% of Marriott School Students, 2008-2012

EXPERIENCE

Stanford University, Martinez Lab   Sept 2020 – Present
Lead Software Engineer   Stanford, CA
- Designing and developing big data systems to tackle unsolved challenges in quantum chemistry
- Developing and managing all cloud infrastructure; transitioning appropriate lab projects to the cloud

QBio   April 2019 – April 2020
Senior Software Engineer   Redwood City, CA
- Designed, architected, and deployed all dev and prod infrastructure to create code-specified, identical environments for testing and production. Deployed VPCs, scalable compute clusters, reverse proxies, real-time, dynamic DNS configuration, automated logging and other basic services for supporting rapid application development
- Designed, architected, and deployed initial patient dashboard for visualizing and exploring results from a QBio visit
- Designed, architected, and deployed backend services for storing, protecting, and serving sensitive medical data
- Designed, architected, and deployed ETL pipeline for transforming data from raw sources into parsed and normalized internal data representations

Meson Capital Partners, LLC   July 2017 – May 2018
Software Engineer   San Francisco, CA
- Designed, architected, and implemented fully automated trading system responsible for managing entire fund's assets; system managed accounts across three brokerages and placed tens of thousands of automated trades worth over $300MM
- Deployed trade system via containerized architecture (Docker, docker swarm) to EC2 as part of CircleCi CI/CD pipeline; made substantial use of Docker, EC2, ECR, CloudWatch Logs, Events, Alarms, and Metrics for real-time monitoring of system health
- Built comprehensive test suite for entire application using pytest; deep use of fixtures, parameterization, and testing best practices
- Architected and implemented admin interface for management to display real-time trading state
- Designed and implemented high performance interfaces for brokerage order management using socket-level connectivity and multi-threaded producer/consumer model for real-time order management
- System developed in Python; used Django & Django Rest Framework to wrap web api around application for external modification and querying of system state
- Transferred hundreds of lines of Python (pandas) data processing to pure SQL and reduced processing time from ~4 hours to < 10 minutes
- Wrote and maintained series of AWS Lambda functions for daily data collection, curation, and storage from multiple data sources

PsychEngine.com   Nov 2016 – July 2017
Founder & Software Engineer   San Francisco, CA
- Developed web app on JAMstack methodologies for super-fast, CDN distributable frontend code, and a fully decoupled Django Rest Framework backend powered by PostgreSQL
- Built app using ES6, React.js, Django Rest Framework, deployed on Netlify and Heroku; capable of delivering millions of surveys to over 150 countries worldwide.
- Currently used by research teams in the USA and Canada

Harvard University & Harvard Business School   May 2015 – Aug 2016
Researcher & Software Engineer   Cambridge, MA
- Created and performed statistical analyses on large (20GB+) databases using STATA to identify trends and extract publishable data; research focused on international asset prices and foreign exchange, transmission of monetary policy, and mergers and acquisitions
- Created analyzable databases (20GB+) by aggregating data sources from text files, online economics data feeds, and other sources
- Ran large analyses on server clusters hosted at HBS
- Developed automated Python program to handle data management, survey distribution, email follow-ups, and workflow for the American Foundation for Suicide Prevention study thereby freeing up researcher time for participant recruitment and follow-up
- Created Python program to deploy an ecological momentary assessment study that sends surveys via SMS to participants at random times throughout the day to gather emotional data and track participant moods
- Supported PIs on developing research questions surrounding our data sources that were novel, publishable, and impactful
- Enrolled in a 7-week block of classes taking both multivariable calculus and linear algebra/differential equations simultaneously; A- grade in each class

Synthego Corporation   Apr 2013 – Dec 2014
Analytical Chemist   Redwood City, CA
- Developed core technology platform for ultra-high throughput synthesis, purification, and analysis of macromolecules; quickly reached limits of published literature on our process and generated sizable amounts of novel, patentable research on molecular synthesis of macromolecules
- Tracked 150+ molecular impurities and correlated impurity profiles with hundreds of various changes in experimental conditions in order to optimize synthesis cycles; generated terabytes of data that we could analyze on a time series
- Formulated research questions, then designed, executed, and analyzed 100s of experiments to interrogate molecular synthesis outcomes using SPE purifications, HPLC, UPLC, high resolution ESI-MS, and MALDI-MS methods
- Performed market research and created pitch materials used to raise $10MM in venture financing
- Sourced $7MM+ in business through proprietary relationships and network including lecturing to the entire science team at a multibillion-dollar pharmaceutical company and closed a development relationship with their head of chemistry

Lucidchart.com   Mar 2012 – Dec 2012
Entrepreneur in Residence   Draper, UT
- Took core Lucidchart technology and designed entirely new consumer internet product with no managerial oversight; resulted in US Patent as principle Inventor
- Led total project management from market research through successful product launch at Tech Crunch Disrupt SF 2012
- Created and helped implement new enterprise strategies for Lucidchart

Jumbas.com   Apr 2011 – Dec 2011
Co-Founder and CEO   Provo, UT
- Led full development of company from idea to successful launch of web application with over 7,000+ users in under 3 months
- Selected as 1 of 10 companies out of 150 applications to participate in BoomStartup incubator program; raised $15k to back our company
- Worked closely with leading entrepreneurs and VCs to raise money and further develop the business including Ed Esber (CEO Ashton Tate), Phil Schlein (USVP), Pivot North Capital, The Angels' Forum, and many others

XoomPark.com   Sep 2010 – Sep 2011
Co-Founder and CEO   Provo, UT
- Raised $100k in funding for launch of online parking reservation website
- Formed strategic alliances with online parking industry leaders
- Led brand creation, strategic design, and full development and deployment of web application from inception to launch

PROGRAMMING EXPERIENCE
- Python, JavaScript, Django, Django Rest Framework, Jinja2, React.js, Bootstrap, HTML, CSS, PostgreSQL, MySQL, AWS (EC2, ECR, Lambda, CloudWatch Logs, Events, Alarms, Metrics, IAM, S3, SES, RDS), Docker, container orchestration, CircleCi, pytest

PERSONAL
- Fluent in Spanish, Ironman finisher, US Patent holder, enjoy competitive motorcycle racing, downhill skiing, playing and writing music, playing soccer, and travelling
- Traveled to Canada, Argentina, Germany, France, Spain, Switzerland, Italy, Austria, Czech Republic, Costa Rica, South Korea, North Korea, China, Mexico, Norway, Sweden, Finland, Nepal, United Arab Emirates, Belize, New Zealand, Indonesia, and Denmark