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# Justin Headley

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## Education

**Udacity** - [Nanodegree in Artificial Intelligence](#) **September 2017**  
**Coursera** - [Machine Learning by Stanford University](#), Grade: 97.3% **April 2016**  
**University of Alabama, Tuscaloosa** - M.S. Computer Engineering, GPA: 3.8 **May 2015**  
**University of Alabama, Tuscaloosa** - B.S. Computer Engineering and Math, Minor in CS, GPA: 4.0 **May 2009**

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## Experience

**[Scal.io](#) - Software Engineer** **San Francisco, CA | Jan 2016 - Present**

- Led development of 4 out of 8 projects, working with up to 5 developers in various international locations.
- Utilized personal [open source projects](#) for rapid development, reducing client developer costs by ~30% and increasing company throughput by ~35%.

**[Center for Advanced Public Safety](#) - Assistant Research Engineer** **Tuscaloosa, AL | Aug 2014 - Dec 2016**

- Updated a license plate inventory management application to use IoC and automated testing, reducing the maintenance of a system that processed and received thousands of orders from citizens across the state.
- Developed a [Nuget package](#) via Powershell and T4 emphasizing best practices such as IoC, repository pattern, and separation of concerns. Reduced project startup time by ~50% and future overhead costs by ~80%.

**[Autonomous Robotic Lunar Excavator](#) - Team Lead/Systems Engineer** **Tuscaloosa, AL | 2009 - 2014**

- Founded team in 2009 to compete in [NASA Robotic Mining Competition](#), which continued to win 5 National Championships out of 9 competitions.
- Designed the only system to complete a fully autonomous task of [path planning, obstacle avoidance, excavation, docking, and dumping](#) out of 500 competition attempts from 250 separate teams.

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## Projects

**[rest-hapi](#) - RESTful API generator** **Oct 2016 - Present**

- Developed framework that [generates API endpoints](#) based on model schemas while providing built-in authorization, validation, documentation, and audit logs.
- Adds relational functionality to MongoDB and supports search, sort, pagination, and match queries as well as embedding of relational data.
- Deployed as an [npm package](#) with ~60k downloads to date.

**[appy](#) - Full stack boilerplate web app** **Nov 2016 - Present**

- Designed fully functional web app aimed at MVP bootstrapping.
- [Live demo](#) supports authentication flows, chat, document management, social network, and admin controls.
- Leverages rest-hapi to provide powerful and flexible [permissions system](#) similar to Google Cloud IAM.

**[divy](#) - Social rewards app for client** **April 2017 - July 2017**

- Developed backend for website and mobile app and initial web frontend.

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## Publications

<https://hackernoon.com/@headley.justin>

**[How to build powerful REST APIs blazingly fast with Node.js](#)** **June 26, 2018**

- 30k views, 4.8k likes

**[The Problem with MongoDB](#)** **February 12, 2017**

- 27k views, 478 likes

**[The Problem with APIs](#)** **November 19, 2016**

- 7k views, 160 likes

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## Technical Skills

**Languages:** Javascript, Typescript, Python, C#, HTML, CSS, C, C++, MATLAB

**Frameworks:** Nodejs, Hapijs, Angularjs, Vuejs, Nestjs, Entity Framework

**Tools:** Mongoose, Sequelize, Typeorm, Jest, NATS, gRPC, Docker

**Other:** AWS, EC2, GCP, CircleCI, Travis CI, git, MongoDB, MySQL, Postgres, Elasticsearch