

# KEVIN LYONS

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*Engineer focused on building scalable software to improve user experience and create real change.*

## EDUCATION

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- **Massachusetts Institute of Technology** | 4.5 GPA, B.S. Computer Science 06.2020

- **Courses:** Algorithms, Computational Structures, Machine Learning, Mathematics for C.S.
- **Around campus:** MIT football player, fraternity community chair and high school student mentor

- **Weymouth High School** | Valedictorian 06.2016

- **Leadership positions:** NHS President, Varsity Math Team, Football and Basketball Captain

## PROFESSIONAL EXPERIENCE

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- **Data Science Intern** | Philips Research America, Cambridge, MA 05.2017-08.2017

Worked with research team to implement deep learning pipeline for lung cancer image analysis.

- **Scalable product:** Wrote HDF5 data loader in Python for fast I/O of 20K+ lung nodule crops with extensibility and documentation
- **Machine learning:** Evaluated deep 2D CNN's for multi-label lung nodule classification
- **IP generation:** Authored invention disclosure for ML-based clinician support system w/ MGH (Boston)

- **Research Software Engineer** | CityScope @ MIT Media Lab, Cambridge, MA 09.2016-08.2017

Assisted Master's Thesis seeking improved data-driven city space allocation for urban planners.

- **Agent-based modeling:** Optimized multi-agent Java simulation of 24 hr. to 45 sec. runtime
- **Data handling:** Generated train/test sets of 10K+ cities for supervised learning with JSON and Python
- **Machine learning:** Utilized linear regression and shallow CNN for traffic and solar radiation prediction

- **Full Stack Software Engineer Intern** | LifeYield, Boston, MA 05.2015-08.2016

Served as agile developer for front-end web fixes and in-house monitoring for financial firm.

- **User experience:** Performed regular web app updates with HTML, CSS and JavaScript
- **Back-end optimization:** Sped up all web service calls by 40% via improved XML serialization and processing
- **In-house tool:** Deployed log monitor with C# to connect cloud computing environment with Splunk server and SQL database

## PERSONAL PROJECTS

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- **WildcatConnect iOS App** | wildcatconnect.com 05.2015-Present

Founder and lead developer of productivity app for Weymouth HS. 2016 #1 Senior Project Award.

- **User experience:** Integrated push notifications of key events and custom groups for students
- **Security:** Built on AWS-hosted Express Node.js server with tiered user levels and two-factor e-mail authentication
- **Workflow integration:** Used for 3+ years by 6,000+ users with simple iOS app and website

- **Personal Package Development** | github.com/kalyons11/kevin 07.2017-Present

Writing simple Python package and related code in free time to understand latest software tools.

- **Engineering skills:** Practicing algorithm skills and fundamental software practices in Python and Java
- **Full-stack:** Using Travis CI to monitor build status and pip to manage package dependencies

## LANGUAGES

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**Advanced:** Python, Java | **Proficient:** JavaScript, C#, HTML, CSS | **Beginner:** C, C++, SQL