GEORGE ALEXANDER ("ALEX") REICHENBACH

Campus Address:	**Permanent Address:**
Phillips Academy Andover	6 Chwee Chian Road
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WORK EXPERIENCE

Programmer, **Affectiva, Inc.**, Boston and New York   Summer 2016
Affectiva is an emotion measurement company spun out of MIT's Media Lab and backed by Kleiner Perkins

- Built multisystem, scalable scraping framework to download videos, check licenses, convert, process, sort, and upload to an AWS S3 instance. The framework processed ~16,000 videos, each with clear speech segments and faces
- Assigned to research team under the speech lead based on video scraping framework
- Built an emotion classification model using the video data set together with speech lead. Explored several deep convolutional neural network architectures (e.g., MFCCs) and ultimately selected an end-to-end approach despite model training challenges
- Moved from Boston to New York to finish a laughter regression model using the emotion classification model
- Created real time web demo for model; despite Java script constraints, achieved low latency by enabling multiple worker threads and the gpu
- Laughter model was featured at MIT Media Lab's 2017 Emotion AI summit, was picked up by TechCrunch and NPR, and will result in a patent with me as a named inventor

PROJECT EXPERIENCE

PACTF (Phillips Academy Capture the Flag), Andover   2015 - 2017
PACTF is an annual online computer security competition for middle and high school students. Several thousand teams from around the world compete annually for prizes. $20,000+ in prizes in 2017 from lead sponsors JP Morgan, Amazon, and Carnegie Mellon.

- *Project Lead (April 2017 – current)* – Organized development and marketing teams, while still writing problems.
- *Head Problem Writer (April 2016 – April 2017)* – Developed problems on topics ranging from binary exploitation and web security to cryptography
- *Team Member (April 2015 – April 2016)* – Helped found competition. Wrote many of initial problems.

Team Captain, **HackNEHS, New England High School Hackathon**, Andover   2016 and 2017
A new day long hackathon run by high-schoolers for high-schoolers; 200 attendees from 25 schools in 2017

- 2017 – Our team, RAaQ, won the competition with a website solution which identifies keyword associations in popular news outlets based on word prompts
- 2016 - Our team, StudyMuse won the competition with a website that generated music using probabilistic Markov models, the Mingus library, and Ruby on Rails. Received over $10,000+ worth AWS storage which I'm currently using to train a better musical generative adversarial network

Programmer **VEX Robotics**, Andover   2016 - 2018
The largest global robotics competition involving 40+ countries, 16,000+ teams, and 1,000,000+ students competing to make Vex Worlds in Louisville where 1,400 teams compete. In 2016 and 2017 won Massachusetts and New England and have qualified for regionals in 2018. Participated in Worlds in 2016 and 2017 [results worth mentioning?]

EDUCATION

Senior, **Phillips Academy Andover**   2014 – 2018

- Honors student all terms
- Taken 12 level 6 classes (college level courses typically taken by majors in the subject), including Fluid Mechanics, Multivariable Calculus an Linear Algebra, Seminar on Graph Theory and Combinatorics, Calculus BC, Honors Physics Seminar on Intermediate Mechanics, Comp Sci Seminar on the Open Source Movement, Physics Independent Project on Aerodynamic Efficiency, Calculus Based Physics (Mechanical and Electrical), Physics Independent Project on Joining Robotics and Artificial Intelligence (Spring Term)
- Varsity, Ultimate Frisbee   2017-2018

OTHER INTERESTS: Classical and jazz piano for over 13 years, tennis, and travel