

# Allison King

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## Education

- **Swarthmore College** **Swarthmore, PA**  
*2011-2015*  
*Bachelor of Science in Engineering. GPA: 3.70*
    - McCabe Engineering Award for Outstanding Engineering Student of the Graduating Class
    - *Technical Coursework:* Embedded Systems, Computer Graphics, Mobile Robotics, Video Game Design
    - *Storytelling Coursework:* Asian American Literature, Creative Writing Workshop, Tolkien and Pullman and Their Literary Roots, Contemporary Chinese Cinema
  - **Additional Courses** **Greater Boston Area**  
*Spring 2017*  
*Spring 2016*  
Machine Learning (Boston University Metropolitan College)  
Mobile Application Development Using Swift and iOS (Harvard Extension School)
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## Professional Experience

- **MIT Lincoln Laboratory** **Lexington, MA**  
*July 2015 - Present*  
*Associate Technical Staff* (promotion effective Feb. 2018)
    - Serving as chief software architect for a suite of applications for open architecture systems to be utilized by the United States Air Force. Applications include a web application built on **AngularJS**, **Express**, **Node.js** and **PostgreSQL** with a REST API, and multiple **Java** programs to verify and validate distributed systems.
    - Serving as a software lead for a new program to achieve communication across multiple domains (air, space, ground, sea). Researching leading deployment technologies such as **Ansible** to achieve cyber secure distributed software.
    - Tested and evaluated contractor software (**Java**) for the Defense Advanced Research Projects Agency. Acted as the first user of contracted software and presented feedback to DARPA in the form of deep-dive technical presentations.
    - Contributed to the development of a fake news classifier in **Python**
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## Projects

- **Our Taiwanese American Story** **January 2017 - Present**
    - Designed and implemented a **Ruby on Rails** website intended to collect and archive stories of Taiwanese Americans to preserve a collective history and to foster intergenerational and intercultural communication
    - Volunteered as the primary software developer and maintainer. Site also utilizes **HTML**, **CSS**, **JavaScript** for front end, **PostgreSQL** for a database, **Amazon S3** for file uploads and storage, and **Heroku** for deployment.
    - Worked with team to secure funding from [Taiwanese American Archives](#) to maintain site for at least two years
  - **Visualizing Harry Potter Fan Fiction: 1999-2017** **Summer 2017**
    - Scraped the metadata of 560,000 Harry Potter fan fictions with **Python** from [FanFiction.net](#)
    - Used **D3.js** to create seven interactive visualizations— examples include comparing gender representation in canon vs. fan fiction and comparing titles of stories written about straight vs. gay relationships
  - **International Movie Recommender** **Spring 2017**
    - Designed and implemented a machine learning recommender system in **Python** that attempts to counter the bubble of recommending similar movies by instead using learned preferences to recommend movies from different countries
  - **Low Cost E-Reader** **Spring 2015**
    - Built a low cost e-reader from scratch using a microcontroller, an LCD screen, an SD card, and batteries
    - Prototyped on a breadboard, programmed the microcontroller in **C**, and soldered final prototype. Total cost summed to under \$50
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## Skills

**Computer Languages:** Java, JavaScript, HTML, CSS, Python, SQL, Ansible,  $\text{\LaTeX}$   
**Technologies:** D3.js, AngularJS, Ruby on Rails, Flask, Maven, Git, Subversion