

# MIGUEL AMEZOLA

## PROFESSIONAL ENGINEERING EXPERIENCE

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### Software Engineer

### General Atomics Aeronautical Systems, Inc.

Jul 2017 - Present

- Worked together with other team members in the development of an intelligence processing, exploitation, and dissemination system using the .NET Framework.
- Implemented software features, reviewed source code, led engineering design reviews, participated in customer workshops, and prepared application demonstrations locally and abroad.
- Coordinated work with other team members in a professional manner, asked for clarification whenever required and produced good quality results in a timely manner.

## FEATURED PORTFOLIO ITEMS

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### Personal Project

### Markdown Editor

Jan 2016

- Developed a string matching and parsing algorithm for parsing Markdown into HTML.
- Used TypeScript to implement the algorithm in order to edit posts in a mathematics blog.
- Features thorough unit testing with the Mocha JavaScript testing framework and the Chai assertion library.
- Source code: <https://github.com/aM3z/QuetzalJS>
- Demo: <https://output.jsbin.com/hododa>

### Academic Project

### Testing for Compositeness

Sep 2016 - May 2017

- Explored the mathematical formulation of the Miller-Rabin test for compositeness and used Python to implement it along with its supporting concepts.
- Compared the performance of the Miller-Rabin test with a support vector machine binary classifier from Scikit-Learn.
- Implemented the Miller-Rabin test as an Angular 2 web application in order to showcase it during a 15-minute presentation.
- Source code: <https://github.com/aM3z/testing-for-compositeness>
- Demo: <http://demo.miguelamezola.com/miller-rabin/>

### Personal Project

### Affine/Polyalphabetic Cryptosystems

Sep 2016 - Dec 2016

- Used concepts from a course in abstract algebra to implement the Affine Hill cipher.
- Developed an R package featuring a variety of functions for modular arithmetic and linear algebra.
- Implemented a web application using the R Programming Environment and Shiny, a web application framework for R.
- Source code: <https://github.com/aM3z/ragde>
- Demo: <https://amezolma.shinyapps.io/ragde/>

## EDUCATION AND RELEVANT COURSEWORK

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### Tacoma, WA

### Pacific Lutheran University

Spring 2017

- Bachelor of Science in Mathematics
- Bachelor of Arts in Computer Science
- Cum Laude, GPA: 3.6/4.0
- Deans List Fall 2015 and Spring 2016
- Relevant Coursework: Abstract Algebra, Computer Networks, Data Structures, Databases and Web Programming, Intro to Computer Science, Machine Learning, Mathematical Analysis, Numerical Analysis, Web Development

## PROGRAMMING AND TECHNOLOGIES

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**Programming:** C#, TypeScript, JavaScript, R, Python, Java  
**Frameworks:** .Net Framework, Angular  
**Version Control Systems:** Team Foundation Server (TFS), Azure DevOps, Git  
**Web Servers:** Apache, Internet Information Services (IIS)  
**Databases:** MS SQL, MongoDB, MySQL