# Carl De Vries

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# Education

## Iowa State University College of Engineering | Ames, IA

### *Bachelor of Science in Aerospace Engineering*

### GPA: 3.84

### Expected Graduation: May 2019

## Des Moines Area Community College | Boone, IA

### *Associate of Arts Liberal Arts Pre-engineering* w/ Honors

### GPA: 3.76

### January 2012 - December 2014

## Work Experience

### Software Engineering Co-op

### *Rockwell Collins | Cedar Rapids, IA January 2017 – present*

### Verified functionality and DO-178B Level A compliance for 75 Simulink models upgraded from 2007a to 2016b

### Decreased build times via script enhancements by omitting unchanged models from the build process

### Developed graphical and logical flight display software components to meet customer requirements on time

### Eliminated a 30 minute environment setup task to update 200 files manually by writing a batch script

### Developed a script to parse and sort C code lint violations into CSV format leading to increased efficiency when analyzing multiple instances of similar violations

### Application Developer I

### *Principal Financial Group | Des Moines, IA May 2014 – June 2016*

### Developed software in an Agile environment to rapidly provide business critical features and application stability

### Administrated servers and established governance for IBM Operational Decision Management development

### Implemented an automated build, test, and deployment pipeline to increase efficiency for IBM ODM development

### Developed a Ruby script which decreased regression suite execution time from 90 minutes to less than 5 minutes

### Mentored an intern on Agile methodology, Java EE development, and how to evaluate business requirements

## Skills

### Languages: Python, C++, MATLAB, Simulink, Java, SQL

### Methodologies and Technologies: Scaled Agile, Test Driven Development, Java EE, Git, SVN, Linux

### Rockwell Technologies:

## Honors Projects

### Developing a Sounding Rocket Model (C++)

### Developed a multi-stage sounding rocket model based on a system of ordinary differential equations

### Analyzed single versus multistage motor configurations with flight data generated for the Black Brant V and IX

### Predicting Reliable Landing Times and Initial Velocity for a Lander in a Two-Body System (C++)

* Implemented C++ solutions for the Euler method and 4th Order Runge-Kutta differential equation solvers

### Conducted a parameter study to identify a curve fit to predict landing solutions for a lunar descent model

### Analysis of Numerical Root-finding & Integration Methods (TI-BASIC)

* + Presented a comparison of implementations for 4 root-finding methods and 3 numerical integration methods

## Organizations

#### American Society for Engineering Education Model Design Competition *July 2014*

### Implemented a PID algorithm in C++ to navigate a vehicle about a 12 foot track 5 times in less than 60 seconds

#### NASA National Community College Aerospace Scholar *February 2014*

#### Designed a Mars mission and 3D rover model to collect data on pit craters surrounding Arsia Mons

#### ISU Computer Science and Software Engineering Club *August 2016*

#### American Institute of Aeronautics and Astronautics *January 2015- September 2016*