

# Rachel Hatteberg

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## Education

### **Masters of Science in Meteorology, 2014**

Iowa State University, Ames, IA

Thesis – “*Analysis of surface wind speed distributions: a look into NARCCAP models and ASOS data throughout the Contiguous United States*”

Developed analytical model using NCAR Command Language which allowed for quality control and statistical analysis of observational and model simulated wind data

### **Bachelor of Science in Meteorology, 2010**

Iowa State University, Ames, IA

## Professional Experience

### **Software Engineer – Aeris, LLC**

8/2018-Present

- ∞ Department of Defense Joint Effects Model (JEM)  
Implementation and maintenance of software system  
Completed Visual Studio and Intel compiler update to entire software suite

### **Research Engineer - IMSG, Inc & GAMA-1 Technologies, LLC**

10/2016

– 8/2018

*NOAA/NESDIS - Center for Satellite Applications and Research Contractor*

- ∞ FORTRAN and C++ developer on the Algorithm Integration Team
- ∞ Design, code, test, and document software to analyze hi-res remote sensing data from GOES-16, GOES-17 ABI, NPP and J1 VIIRS, and METOP AVHRR sensors
- ∞ Integrate science algorithm software into large-scale framework
- ∞ Develop effective configuration management strategies with Git and ClearCase
- ∞ Lead software code reviews in GitLab to ensure high coding standards and maintainability

### **Scientific Programmer/Analyst I/II - SGT, Inc.**

12/2013-10/2016

*NOAA/NESDIS - Office of Satellite and Products Operations Contractor*

- ∞ Primary programmer for 24x7 operations and maintenance for ocean-related scientific algorithms consisting of Synthetic Aperture Radar Ocean Surface Wind Speeds, CoastWatch, Coral Reef Watch, and Ensemble Tropical Rainfall Precipitation
- ∞ Developed remote sensing application software development and maintenance using IDL, C, FORTRAN, Python, MATLAB, Perl and bash
- ∞ Created automation and testing scripts
- ∞ Data analysis and visualization of GOES, POES, and SAR remote sensing data using developed software
- ∞ Debugged software in an operational setting
- ∞ Collaborated with research scientists and aid in development and implementation of algorithms
- ∞ Updated/maintained various webpages – html, javascript, cgi scripting

- ∞ Operationally handled and manipulated large datasets (> 1 TB/day) in formats including hdf, netCDF, grib
- ∞ Authored and maintained extensive technical documentation for remote sensing algorithms – system maintenance manual and external user’s manual

**Student Meteorologist (SCEP)**

6/2010-1/2013

*NOAA/NWS Des Moines, IA Weather Forecast Office*

- ∞ Independently tasked meteorologist with creating and disseminating river, aviation (TAFs), as well as long and short-range forecasts.
- ∞ Lead and participated in community outreach events for educating the public on severe weather safety

**Graduate Research Assistant** under Dr. Eugene S. Takle

8/2010-5/2011

- ∞ Assisted advisor on surface wind research – software development and analysis

**Other Experience**

American Meteorological Society – Student Chapter President

4/2009-6/2010

- ∞ Chapter of the Year for the 2009-2010 academic year
- ∞ Expanded severe weather awareness and community outreach

Central Iowa National Weather Association Chapter Secretary

9/2010-9/2011

**Technical Skills**

<b>Programming Languages</b>	<b>Scripting Languages</b>	<b>Configuration Management</b>
FORTRAN	Shell	Git/GitLab
C/C++	Bash	ClearCase
IDL	Perl	Subversion
NCL		
MATLAB		
Python		
<b>Development Tools</b>	<b>Operating Systems</b>	<b>Microsoft Office</b>
GDB	Windows	Word
TotalView	Linux	Excel
Eclipse	AIX	Power Point
		Access

**Awards**

- ∞ “Achievement Award” For outstanding effort meeting a milestone under a tight deadline  
12/2017
- ∞ “SMOMS Star Award” For efforts in a system migration project (OSPO)  
12/2014
- ∞ “SMOMS Star Award” For initiation in an inventory project (OSPO)  
12/2014
- ∞ “On The Spot” Award for work with community outreach projects (NWS) 7/2011,  
8/2012
- ∞ “On The Spot” Award for creation of climate database (NWS)  
8/2011