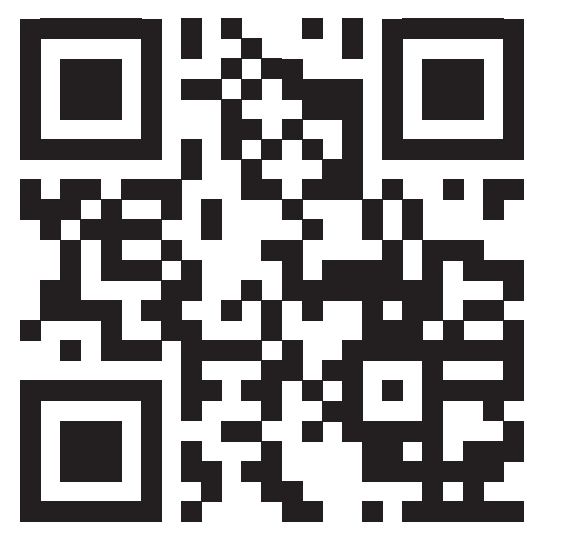




# Benefits of Establishing a Student Operated Forecast Office and Active Learning Environment for Undergraduates



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## Abstract

During the 2013-2014 academic year a group of University of Utah undergraduates created an operational weather center modeled after the local National Weather Service (NWS) field office. The Ute Weather Center creates pin-point forecasts for several locations in the Salt Lake City region. Along with creating daily forecasts primarily focused on the University of Utah, the student-run, student-led team collaborates with the local NWS field office and the University's Facilities Management to create accurate and timely severe weather forecasts. The Ute Weather Center also serves as a proving ground for computer programmers and broadcasters. The center has developed several popular user products and has created additional experimental products specifically designed to appeal to the social media and technology-centric demographic of the student population. The primary goals of this project are to better prepare undergraduate students for the job market and to establish a sense of community amongst the undergraduate students within the Department of Atmospheric Sciences.

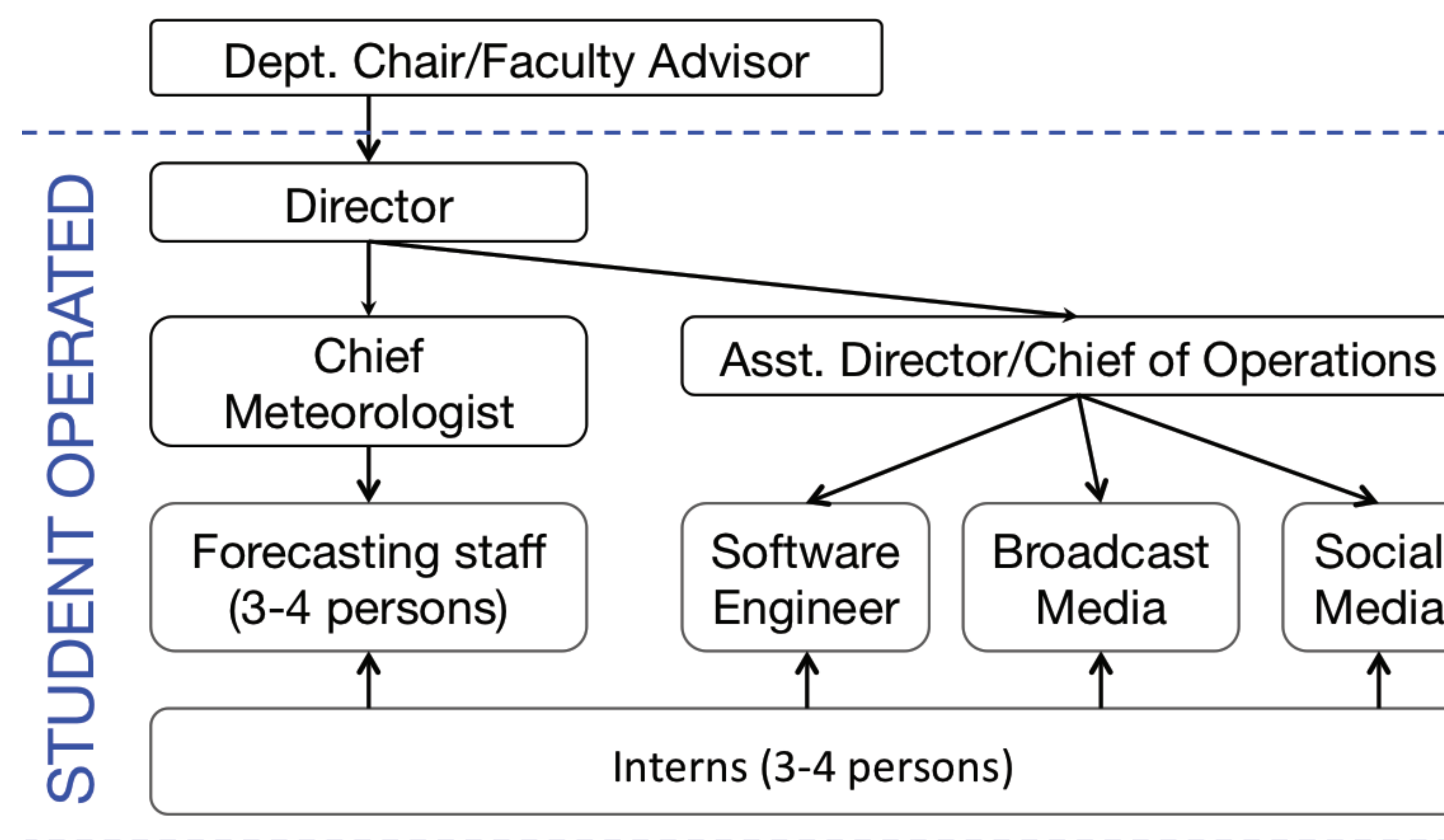


## For more information

[www.forecast.utah.edu](http://www.forecast.utah.edu) or Twitter @uteweather

## Organizational Schematic

Operationally, the student forecast office is modeled after both National Weather Service and U.S. Air Force forecast offices. The organizational model that the Ute Weather Center has developed allows for participation within several capacities, and adaptability to meet current needs. The students in supervisory roles are accountable for their respective sections, providing them valuable leadership experience. This method has been very successful in developing leaders and in evolving products into professional-grade services.



## Performance Metrics

Daily performance is measured by validating high and low temperatures, precipitation type and quantity. A day zero through day three forecast is considered validated if temperatures are within two degrees of observed; days four and five have a three degree tolerance. The Ute Weather Center utilizes the Mountain Met Lab station (MTMET) located on the University campus for forecast validation. MTMET is part of the MesoWest observational network. Google Analytics (TM) and Twitter Analytics (TM) are used to measure daily outreach and content syndication.

## Benefits

The Ute Weather Center is a student-operated forecast office. This allows students who are newly exposed to forecasting to feel comfortable asking questions and learning by trial and error, and encourages some natural competition amongst peers to hone their skills. Students frequently teach and learn from one another, sharing diverse skill sets to benefit the group experience.

### Student Benefits

- Provides real world experience
- **Develops quantitative forecast abilities**
- Requires collaborative skills to produce a daily product
- **Creates paid student positions**
- **Establishes a closer working bond with department and peers**
- **Students demonstrate potential early in their college career**

### Department Benefits

- **Massive department visibility to both the University and public: ~30K viewers daily, ~65-70K during severe weather events**
- Ute Weather has held a 100% departmental retention rate among involved students
- Improved student morale and camaraderie
- **Students teach students**
- Gives faculty exposure to student's willingness and potential

### Special Thanks & Acknowledgments

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