

## Andrew J. Guenther

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**Summary:** **Data scientist and manager** with successful track record of award-winning data-based discoveries and successful team-building. Strengths: rapid learning, adding business value through technical insights, and creating compelling technical stories for a broad range of audiences

**Skills:** Data analysis via **statistics, machine learning, and modeling**. Programming in **C++, Python, Visual BASIC, and Matlab**. Web design using **HTML and WordPress**.

**Additional Skills:** **Fund-raising** (over \$12M in grants for 18 innovative projects), product development, technical marketing, operations management, intellectual property development, mentoring, team-building, thought leadership, organizational leadership

### Projects:

#### Industrial Thin Film Analysis

- **10x improvement** in the precision of heat transfer measurements from embedded sensors
- Results accepted for publication, to appear at <https://www.astfe.org/tfec2019>
- Combined with multiple analytic breakthroughs to assess high-value business opportunities

#### Solubility Parameter Analysis

- New, custom method provides **unique uncertainty and reliability indicators**
- Results published at: <https://pubs.acs.org/doi/abs/10.1021/ie300767p> - 28 citations

#### Quantitative Structure-Property Relationships for Biomaterials

- **Award-winning project** identifies new value opportunity in renewable materials
- Award news release: <https://www.serdp-estcp.org/News-and-Events/Blog/Cyanate-Ester-Composite-Resins-Derived-from-Renewable-Polyphenol-Sources>

### Experience:

#### *Chief Technology Officer, Nano Hydrophobics, Inc.*

2018 – 2019

- **Developed data analysis tools** to extract and quantify key performance metrics
- Created data-driven technology, intellectual property, and business plans
- Secured an additional nine months of operating runway through fund-raising

#### *Group Leader and Senior Technical Advisor, Air Force Research Laboratory*

2016 – 2018

- Built 10-yr strategy, metrics dashboard, and operations plan for \$10 M / yr, 60-person team
- Integrated a comprehensive suite of modeling and simulation tools into team operations
- **Expanded resource base** by \$2M / yr in less than two years

#### *Senior Chemical Engineer, Air Force Research Laboratory*

2009 – 2016

- Completed 4 data-driven research programs resulting in 36 journal articles and 9 patents
- **Converted basic research insights** into a **\$4M “game changing”** fuel production program
- Utilized quantitative analysis to produce award-winning scientific insights (3 major awards)

**Education:** UC Berkeley Data Analytics Certificate – Expected Completion, August 2019

Ph. D., Polymer Engineering, The University of Akron