Dr. Aaron Beach   720-227-3626
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**"I am a Data Scientist with experience in energy systems, privacy,
social and sensor networks, semantics, advertising and Big Data"**

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Summary

- **Background**
  I have a PhD in Computer Science and have worked in Industry (3 years), Academia (5+ years) and Government (2 years).
- **Entrepreneurial**
  I have two patents and founded a tech-startup related to text matching and mobile advertising.
- **Academic**
  I have over 25 publications, 250 citations and have given many invited talks at places like Microsoft Research and ETH-Zurich.

- **Software**
  I am a software developer and have both managed and hired multiple development teams for research and commercial products.
- **Awards**
  I have received grants, fellowships and awards from the NSF, Ford, Motorola and many universities.
- **Current**
  I analyze email data to improve cloud-based email service for SendGrid.

Experience

- **Senior Data Scientist** - Since 6/2013   SendGrid Denver, CO
  I mine email data to improve cloud-based email services.

- **Informatics Engineer** - 12/2011 to 6/2013   NREL Golden, CO
  I lead multiple informatics and data related projects at the lab having to do with energy data collection, security, modeling, prediction and visualization.

- **Postdoctoral Researcher** - 5/2011 to 12/2011   NREL Golden, CO
  I built a search engine and automated metadata extraction from text.

- **NSF Fellow** - 2008-2010   NSF GK-12 Fellowship, Boulder, CO
  I designed STEM (science, technology, engineering, and mathematics) curriculum along with its necessary infrastructure and materials.

- **Founder & Chief Architect** - 2008-2011   Techoshark, inc., Boulder, CO
  In February of 2008 I founded Techoshark, inc. The company received an NSF SBIR grant and produced a technology patent focused on location aware mobile advertising.

- **Visiting Research Specialist** - Summer 2007   NCAR (via CU-Boulder), Boulder, CO
  I designed an energy-efficient routing protocol to support long-term alpine ecosystem monitoring.

- **Teachers Assistant** - 2006-2008, 2010-2011
  In graduate school I taught *Intro to Programming* (2007), *Operating Systems* (2008), *Data Structures* (2010-2011), and advised senior projects (2006).
- **Research Assistant at U. of Colorado**
  I did research on sensor networks, recommendation algorithms and privacy in the Mantis Lab resulting in 11 peer-reviewed papers, 4 tech reports and 2 patents.

- **Research Assistant at Northwestern U.**
  In undergrad I published peer-reviewed research on network security and designed wireless ad-hoc routing protocols.
- **Database Programmer** - 5/2003 to 11/2003
  I was a LAMP developer for half a year.
- **Electrician** - 2002
  I was a licensed electrician for about year.
- **Waterproofer** - 2001
  I worked as a waterproofer for about a year.

Education

- **Northwestern University**
  B.S., Computer Science (honors), 2006

- **University of Colorado**
  Ph.D., Computer Science, 2011

Grants & Awards

- NSF SBIR Phase 1 (2009)
- NSF GK-12 Fellowship (2008-2010)
- Ford Motor Research Grant (2005)
- Motorola Research Grant (2005)
- CU New Venture Challenge Best Computer Science Business Plan (2010)
- Outstanding TA Award (2011)
- Undergrad Research Grants (Twice)

Patent Disclosures

- U.S. Patent Provisional Patent No. 61/163,967, Entitled: SOCIAL NETWORKING PLATFORM; In the Name of TechoShark, Inc., March 27, 2009.
- U.S. Patent Provisional Patent No. 61/221,866, Entitled: CONTEXT-AWARE MOBILE SOCIAL NETWORKING; June 30, 2009.

Professional Service

- On Program Committe for CIOT 2010, MCSN 2011 and IEEE Social Com 2012
- Industry Advisor for PSERC projects in 2013
- Reviewer for: IEEE SocialCom 2011, IEEE Communication Letters, ISCC 2011, PETS 2011, Mobile HCI 2011, IEEE Internet Computing, Pervasive 2011 SenSys 2010, Pervasive 2010, CHI 2010, WoWMoM 2010, Pervasive Health 2010, SenSys 2007

Publications

[1] A. Beach, M. Gartrell, S. Akkala, J. Elston, J. Kelley, K. Nishimoto, B. Ray, S. Razgulin, K. Sundaresan, B. Surendar *et al.*, "Whozthat? evolving an ecosystem for context-aware mobile social networks," *Network, IEEE*, vol. 22, no. 4, pp. 50–55, 2008.

[2] A. Beach, M. Gartrell, X. Xing, R. Han, Q. Lv, S. Mishra, and K. Seada, "Fusing mobile, sensor, and social data to fully enable context-aware computing," in *Proceedings of the Eleventh Workshop on Mobile Computing Systems & Applications*. ACM, 2010, pp. 60–65.

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[11] A. Beach, M. Gartrell, X. Xing, R. Han, Q. Lv, S. Mishra, and K. Seada, "Socialfusion: Context-aware inference and recommendation by fusing mobile, sensor, and social data," Technical Report CU-CS 1059-09, Tech. Rep., 2009.

[12] M. Gartrell, A. Beach, J. Ramanarayanankrishnaniyer, X. Xing, R. Han, Q. Lv, S. Mishra, and K. Seada, "Integrating wikipedia and facebook context into collaborative e-brainstorming," Technical Report CU-CS-1073-10, Tech. Rep., 2010.

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[20] Q. Sun, A. Beach, M. Cotterell, Z. Wu, and S. Grijalva, "An economic model for distributed energy prosumers," in *Hawaii International Conference On System Sciences*, 2013.

[21] ——, "Pricing distributed energy storage in reserve markets," *IEEE Transactions on Smart Grid*, no. Special Issue on "Energy Storage Applications for, 2013.

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