

Mike McCarty

CONTACT INFORMATION

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SUMMARY

Experienced engineering leader focused on building Data Science and Machine Learning tools. Background in scientific computing, software engineering, leadership, and mentoring.

PROFESSIONAL EXPERIENCE

NVIDIA

Senior Engineering Manager, Analytics and Data Intelligence **Apr 2024 - Present**
Managing Cloud and HPC Deployment, Build Engineering and DevOps teams Supporting Analytics and Data Intelligence (ADI) and Agents, Retrieval, and Knowledge (ARK) orgs

Engineering Manager, RAPIDS

Cloud, HPC and Scientific Computing Distributed Computing with Dask and Legate PyData Open-source Projects (Dask, Conda-Forge, NumPy, Pandas, and Scikit-learn)

Senior Product Manager, Python Developer Products

Product manager for Python Developer tools: Legate, cuNumeric, and CUDA Python

Feb 2022 - Apr 2024

NumFOCUS

Advisory Board Member **Aug 2021 - Sep 2024**

Prefect Inc

Advisory Board Member **Jan 2020 - Dec 2023**
Technical advisor on product offerings and open source development

Capital One - Center for Machine Learning

Director of Software Engineering **July 2019 - May 2021**
Senior Manager, Lead Software Engineer **Oct 2018 - July 2019**

Drove adoption of Dask and RAPIDS throughout the enterprise leading to 10-100x computational improvement for model training / predictions and scaled train datasets 2 orders of magnitude.

Led organization building and maintaining custom machine learning tools for the enterprise.

Subject matter expert for the PyData and SciPy software stacks.

Contributed to open source projects (Dask, RAPIDS, XGBoost).

Anaconda Inc

Platform Engineer and Open Source Developer **Oct 2017 - Oct 2018**
Platform engineer on enterprise products. Open Source developer on data science and machine learning projects.

Morehead State University - Dep. of Mathematics and Physics - Morehead, KY

Chairman of Advisory Board **2016 - 2017**

Zoomdata Inc - Reston, VA

Senior Software Engineer / Technical Lead **Sept 2016 - Oct 2017**

Developed and maintained Zoomdata, a Big Data Business Intelligence tool that is capable of connecting to modern data sources for visualization. Led Application Platform development team,

consisting of 6 engineers.

Booz Allen Hamilton - Washington, DC

Lead Engineer

Mar 2016 - Sept 2017

Led development of data management, ingest, analysis, and visualization on TCPI project for the Health and Human Services.

Mission Data - Washington, DC

Principal Engineer

Feb 2015 - Mar 2016

Rivera Group, Inc - Louisville, KY

Software Architect / Product Development Manager

Nov 2013 - Feb 2015

Nub Games, Inc

Senior Software Engineer

Jan 2013 – Nov 2013

National Radio Astronomy Observatory - Green Bank, WV

Software Engineer

Green Bank Telescope (GBT) Software Development Division

Sept 2010 - Jan 2013

National Institute for Computational Sciences / Oak Ridge National Lab - Oak Ridge, TN

Systems Programmer

High Performance Computing Operations Group

Aug 2009 - Aug 2010

National Radio Astronomy Observatory - Green Bank, WV

Software Engineer

Green Bank Telescope (GBT) Software Development Division

Oct 2006 - Aug 2009

National Radio Astronomy Observatory - Charlottesville, VA

Software Engineer

Atacama Large Millimeter Array (ALMA) Front End Integration Center

May 2005 - Sept 2006

EDUCATION

Stanford University

Stanford LEAD Professional Certificate

2024

University of Illinois, Urbana-Champaign, IL

Graduate Coursework

2011

Morehead State University, Morehead, KY

B.S., Physics

2006

B.S., Computer Science

2002

SKILLS

- Programming Languages (professional experience)
 - Python, Java, Ruby, JavaScript, Go, Swift, Lisp, C, C++, Haskell, PHP
- Data Science / Scientific Computing
 - RAPIDS, Dask, Xarray, Pandas, NumPy, SciPy, scikit-learn

- Web Frameworks
 - Spring, Ruby on Rails, Flask, Tornado, Django
- Databases
 - Relational Schema Design, Postgres, MySql, MSSql, Snowflake, MongoDB, ElasticSearch
- Code RCS
 - Git, Mercurial, Darcs, SVN, CVS
- Operating Systems
 - Linux/Unix and macOS
- Areas of Practice
 - Machine Learning at Scale, Cloud Computing (AWS, GCP, Azure), Web Application Development, Database Design and Development, Object-Oriented and Functional Programming, Distributed Computing, Microservices, Systems Engineering, Data Mining and Knowledge Discovery, Technical Writing, Agile Development, Test-Driven Development

PUBLICATIONS

Conference Proceedings

- McCarty, M., Crosby, L., & Baer, T. 2010, “Regression Testing on Petaflop Computational Resources”, in Cray Users Group Meeting Proceedings
- Marganian, P., Clark, M., McCarty, M., & Shelton, A. 2010, “The GBT Dynamic Scheduling System: A Web 2.0 Application”, in Astronomical Society of the Pacific Conference Series, vol. pp. 434
- Balser, D. S., Bignell, C., Braatz, J., Clark, M., Condon, J., Harnett, J., O’Neil, K., Maddalena, R., Marganian, P., McCarty, M., Sessoms, E., & Shelton, A. 2009, “GBT Dynamic Scheduling System: Algorithms, Metrics, and Simulations”, in Astronomical Society of the Pacific Conference Series, vol. 411, pp. 330
- Braatz, J., Balser, D. A., Bignell, C., Clark, M., Harnett, J., McCarty, M., Marganian, P., O’Neil, K., & Shelton, A. 2009, “The GBT Dynamic Scheduling System: The Observers’ Perspective”, in Astronomical Society of the Pacific Conference Series, vol. 411, pp. 334
- Clark, M., Balser, D., Sessoms, E., Bignell, D., Condon, J., McCarty, M., Marganian, P., O’Neil, K., Shelton, A., & Maddalena, R. 2009, “The GBT Dynamic Scheduling System: ‘When do I observe?’ Guiding Users’ Expectations”, in Astronomical Society of the Pacific Conference Series, vol. 411, pp. 338
- Marganian, P., Clark, M., McCarty, M., Sessoms, E., & Shelton, A. 2009, “The GBT Dynamic Scheduling System: Powered by the Web”, in Astronomical Society of the Pacific Conference Series, vol. 411, pp. 342
- McCarty, M., Clark, M., Marganian, P., O’Neil, K., Shelton, A., & Sessoms, E. 2009, “The GBT Dynamic Scheduling System: Development and Testing”, in Astronomical Society of the Pacific Conference Series, vol. 411, pp. 346
- O’Neil, K., Balser, D., Bignell, C., Clark, M., Condon, J., McCarty, M., Marganian, P., Shelton, A., Braatz, J., Harnett, J., Maddalena, R., Mello, M., & Sessoms, E. 2009, “The GBT Dynamic Scheduling System: A New Scheduling Paradigm”, in Astronomical Society of the Pacific Conference Series, vol. 411, pp. 147
- Sessoms, E., Clark, M., Marganian, P., McCarty, M., & Shelton, A. 2009, “The GBT Dynamic Scheduling System: Scheduling Applications of the Knapsack Problem and Sudoku”, in Astronomical Society of the Pacific Conference Series, vol. 411, pp. 351
- McCarty, M. and Ransom, S. December 2005, “GBT Pulsar Observations”, Bulletin of the American Astronomical Society, Vol. 37, pp. 1469