KRISTOPHER J. KOSMATKA

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OBJECTIVE A full-time position in software engineering

INTERESTS Distributed Systems, Web Application Platforms, Scalability,
Location-based Services, Bioinformatics, Medical Image Processing

EDUCATION

2009 – 2011	**M.S. Computer Sciences**, University of Wisconsin – Madison, GPA: 4.0/4.0 Operating Systems, Distributed Systems, Databases, Artificial Intelligence, Natural Language Processing, Bioinformatics
2006 – 2008	**Special Student**, University of Wisconsin – Madison, GPA: 4.0/4.0 Organic Chemistry, Biological Sciences, Genetics
1998 – 2001	**B.S. Mathematics**, University of Wisconsin - Madison, GPA: 3.7/4.0 Programming, Data Structures, Machine Organization, Physics, Literature Dean's List, Graduated with Distinction

EXPERIENCE

09/2010 – Present **Research Assistant**, *Dewey Lab, University of Wisconsin – Madison*, Madison, WI.
- Designed a new Hidden Markov Model for alignment of whole genome optical maps
- Analyzed and evaluated performance and accuracy of alignment predictions
- Implemented front end, visualization, and workflow automation tools in C and Python

05/2010 – 09/2010 **Software Engineering Intern**, *Locomatix, Inc.*, Madison, WI.
- Designed and implemented a RESTful API for a location-based database server platform
- Developed database backend features using C++ and Python
- Built location-aware web applications using latest HTML5 web standards

09/2009 – 05/2010 **Research Assistant**, *Wisconsin Alzheimer's Disease Research Center – Imaging Core University of Wisconsin – Madison*, Madison, WI.
- Implemented distributed medical image processing and analysis pipeline using Condor
- Built a Ruby on Rails application used to schedule and monitor image processing tasks
- Debugged and upgraded legacy physiological signal processing software in Python

08/2007 – 08/2009 **Research Specialist**, *Johnson Neuroimaging Lab, Univ. of Wisconsin – Madison*, Madison, WI.
- Developed software for fMRI image processing and analysis using Python, Matlab, and R
- Designed novel image analysis methods for large cross-institutional study published in **Science**
- Coordinated management of medical imaging data for a multidisciplinary team of researchers

05/2006 – 08/2007 **Student Researcher**, *Johnson Neuroimaging Lab, Univ. of Wisconsin – Madison*, Madison, WI.
- Automated structural and functional MRI data analysis pipelines using Ruby and Python
- Built several public and internal lab web applications using Ruby on Rails
- Administered lab computing resources, network configurations, authentication services,
  data backup, and a 15TB RAID file server

SKILLS

Linux, OSX, Windows
C/C++, Java, Python, Ruby, SQL, Ruby on Rails, Javascript, jQuery, HTML, CSS, Git, SVN, Make, LaTex, vi