

# Keith A. Johansen

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|--------------------------------------|--|------------------------|-----------------------|---|
| <b>Education</b>                     | <b>Ohio State University</b>   |                        |                       |   |
|                                      | <i>Masters of Science</i> in Computer Science & Engineering<br>•Concentration in Machine Learning and High Performance Computing<br>•Passed Comprehensive Masters Exams Spring 2009<br>•3.60 GPA   |                        |                       | 2008 - Present                            |
|                                      | <i>Bachelor of Science</i><br>•Economics: 3.50 Major GPA<br>•Political Science: 3.49 Major GPA<br>•Significant additional coursework in Mathematics, Statistics and Computer Science   |                        |                       | 2003-2008                                 |
| <b>Technical Course Work Summary</b> | Numerical Methods  | Parallel Computing     | Data Mining           |   |
|                                      | Artificial Intelligence  | Machine Learning       | Theory of Computation |   |
|                                      | Calculus   | Analysis of Algorithms | Computer Graphics     |   |
|                                      | Operating Systems  | Linear Algebra         | Computer Architecture |   |
|                                      | Multivariate Statistics  | Stochastic Processes   | Statistical Computing |   |
| <b>Technology Skills</b>             | C/C++, OpenMP, MPI, CUDA, Java, C#, MatLab/Octave, Python, R, Linux, Unix, MS Windows, MS Excel, L <sup>A</sup> T <sub>E</sub> X, SQL, Maple, SVN  |                        |                       |   |
| <b>Certifications</b>                | <b>Chartered Financial Analyst Program</b>   |                        |                       | 2007-Present                              |
|                                      | •Passed the Level I Exam in December 2007<br>•Sat for the Level II Exam in June 2009   |                        |                       |   |
| <b>Selected List of Projects</b>     | <b>Kernel Methods on the GPU</b>   |                        |                       | Spring 2009                               |
|                                      | In Progress. Development of novel algorithm adaptations for the efficient training of Support Vector Machines and Regularized Least Squares Classifiers on the GPU using CUDA.   |                        |                       |   |
|                                      | <b>Hierarchical Bayesian Model for Portfolio Weight Selection</b>  |                        |                       | Winter 2009                               |
|                                      | Applied hierarchical Bayesian models to estimate posterior predictive distributions of asset returns in order to choose appropriate portfolio weights.   |                        |                       |   |
|                                      | <b>Comparison of Parallel Algorithms for Support Vector Machines</b>   |                        |                       | Winter 2009                               |
|                                      | Identified performance bottlenecks, and compared the speed and scalability of parallel algorithms for solving Support Vector Machine problems.   |                        |                       |   |
|                                      | <b>Cluster Analysis for Portfolio Diversification</b>  |                        |                       | Autumn 2008                               |
|                                      | Employed clustering methods to diversify a portfolio.  |                        |                       |   |
| <b>Work Experience</b>               | <b>Journal of Money, Credit, and Banking</b>   |                        |                       | <i>Research Assistant</i>                 |
|                                      | Columbus OH<br>•Replicated and verified the statistical analyses of published manuscripts  |                        |                       | Summer 2007                               |
|                                      | <b>Ohio Department of Job and Family Services</b>  |                        |                       | <i>Web Application Development Intern</i> |
|                                      | Columbus OH<br>•Performed basic web maintenance<br>•Created a set of classes in ASP to decrease development time of common tasks<br>•Developed, as part of a team, an enterprise wide application in C# to manage a complicated workflow |                        |                       | Summers 2004-2006                         |
| <b>Extracurricular</b>               | <b>Club TECH CORPS</b>   |                        |                       | 2009                                      |
|                                      | •Introduce elementary school students to MS Office, basic hardware, programming, and robotics  |                        |                       |   |
|                                      | <b>Franklin County Board of Elections</b>  |                        |                       | 2008                                      |
|                                      | •Assisted citizens in the voting process on election day<br>•Served as part of the bipartisan Ballot Transportation Team to secure the ballots   |                        |                       |   |