Ekrem Kocaguneli

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Education

- West Virginia University, (Jan. 2010 - Dec. 2012), Morgantown/USA, PhD in Computer Science, 3.85/4.00, Thesis: *"A Principled Methodology: A Dozen Principles of Software Effort Estimation"*
- Bogazici University, (2008 - 2010), Istanbul/Turkey, MSc in Computer Engineering (High Honors), 3.65/4.00, Thesis: *"Better Methods for Configuring Case-based Reasoning Systems"*
- Bogazici University, (2004 - 2008), Istanbul/Turkey, BSc in Computer Engineering (Honors), 3.23/4.00
- University of Bonn, (2006 - 2007), Bonn/Germany, Exchange Student

Employment

- Microsoft - Bellevue, USA, (8/12/2013 - Current)

   Software Development Engineer II: Working as part of Bing Ads Data Mining and Diagnostics team. Mined and analyzed the data generated by the underlying platform. Defined appropriate metrics and surfaced actionable information from various parts of Bing Ads pipeline.

- West Virginia University Lane Department of Computer Science and Electrical Engineering.-USA, (1/1/2013 - 8/9/2013)

   Post-doctoral Research Fellow: Researched on machine learning and data mining solutions to reduce data labeling costs. Developed active learning, semi-supervised learning and transfer learning algorithms to help industry practitioners with data labeling. Helped PhD candidates with their research and academic publications.

- West Virginia University Modeling Intelligence Lab.-USA, (1/15/2010 - 12/30/2012)

   Graduate Research Assistant: Conducted research on the applications of data mining, machine learning and data analytics solutions to emerging software estimation problems.

- Microsoft Research Redmond-USA, (6/18/2012 - 09/07/2012)

   Research Intern at Empirical Software Engineering Group: Used data mining to mine data from proprietary databases using C# on ASP.NET platform and SQL. Then used R to investigate and statistically analyze the effects of distributed development on Microsoft products.

- Hong Kong Polytechnic University-Hong Kong, (7/1/2011 - 8/1/2011)

   Visiting Researcher at the Department of Computing: Worked to finalize an ongoing machine learning research project on maximum prediction accuracy of case-based reasoning methods.

- Bogazici University Software Research Laboratory-Turkey, (7/14/2008 - 12/30/2009)

   Researcher at Software Research Laboratory (SoftLab) in the Department of Computer Engineering: Participated in 4 industry collaborated projects as a team lead and team member. Provided practical solutions of data mining and data analytics to vaguely defined industry problems.

- SAP AG-Germany, (7/18/2007 – 9/28/2007)

  Intern for SAP-Volume Business Model (VBM) Project at SL Enterprise Solutions Office of the CEO Department: Generated test cases for SAP Netweaver Business Intelligence. Developed simple queries using BW query design tool. Wrote basic reports using ABAP.

Books
- T. Menzies, E. Kocaguneli, L. Minku, F. Peters, B. Turhan *"Sharing Data and Models in Software Engineering"* (by Morgan Kaufmann, 2014).

Tutorials
- T. Menzies, E. Kocaguneli, F. Peters, B. Turhan, L. L. Minku, *"Data Science for Software Engineering"*, International Conference on Software Engineering (ICSE) 2013

Participated Projects
- IBTech, (April 2009 – December 2009), Team Lead

  An industry-research project to design and implement a software effort prediction model for IBTech (development subsidiary of an international bank): Defined business user needs and proposed solutions through meetings with domain experts. Initiated and finalized data collection project from various business user groups. Built a machine learning-based estimation model for software development effort using the collected data. Presented research progress and results at monthly milestone meetings to managers.

- Turkcell, (2007 – 2009), Team Member

  An industry-research project to develop a measurement and defect prediction model for Turkcell (the biggest GSM provider in Turkey): Collected various metrics such as churn metrics and developer commit information from software repositories. Defined how data can be analyzed for the interest of upper-level management and performed the analysis. Presented results to department managers at monthly milestone meetings.

- Xiruxe, Turkcell, (2008 – 2009), Team Member

  An industry-research project to develop an intelligent fault localization tool: Collected data and information from business users, developers and software repositories. Cleaned and analyzed the collected data. Helped to build a fault localization model based on machine learning. Transferred the model to business users and developers for implementation.

Journal Publications
- E. Kocaguneli, T. Menzies, E. Mendes *"Transfer Learning in Effort Estimation"*, Empirical Software Engineering Journal, 2014.
- E. Kocaguneli, T. Menzies, *"Software Effort Models Should be Assessed Via Leave-One-Out Validation"*, Journal of Systems and Software, 2013.
- E. Kocaguneli, T. Menzies, J. Keung, *"Active Learning for Effort Estimation"*, IEEE Transactions on Software Engineering, 2013.
- J. Keung, E. Kocaguneli, T. Menzies, *"A Ranking Stability Indicator for Selecting the Best Effort Estimator in Software Cost Estimation"*, Journal of Automated Software Engineering, 2012.
- E. Kocaguneli, T. Menzies, J. Keung, *"On the Value of Ensemble Effort Estimation"*, IEEE Transactions on Software Engineering, 2011.
- E. Kocaguneli, T. Menzies, A. Bener, J. Keung, "Exploiting the Essential Assumptions of Analogy-based Effort Estimation", IEEE Transactions on Software Engineering, 2011.

- E. Kocaguneli, T. Menzies, J. Keung, *"Kernel Methods for Software Effort Estimation"*, Empirical Software Engineering Journal, 2011.

- A. Brady, T. Menzies, E. Kocaguneli, "What Is Enough Quality for Data Repositories?", Software Quality Professional, 2011.

Conference Publications

- E. Kocaguneli, B. Cukic, H. Lu, *"Predicting More from Less: Synergies of Learning"*, RAISE Workshop at International Conference on Software Engineering (ICSE) 2013

- E. Kocaguneli, T. Zimmermann, C. Bird, N. Nagappan, T. Menzies, *"Distributed Development Considered Harmful?"*, International Conference on Software Engineering (ICSE) 2013

- E. Kocaguneli, T. Menzies, *"Size Doesn't Matter? On the Value of Software Size Features for Effort Estimation"*, International Conference on Predictive Models in Software Engineering (PROMISE) 2012

- E. Kocaguneli, T. Menzies, *"How to Find Relevant Data for Effort Estimation"*, International Symposium on Empirical Software Engineering and Measurement (ESEM) 2011

- E. Kocaguneli, B.Caglayan, A. Tosun, A. Bener, *"Experiences on Developer Participation and Effort Estimation"*, EUROMICRO Conference on Software Engineering and Advanced Applications (SEAA) 2011

- E. Kocaguneli, G. Gay, Y. Yang, T. Menzies, *"When to Use Data from Other Projects for Effort Estimation"*, (Short Paper) International Conference on Automated Software Engineering (ASE) 2010

- E. Kocaguneli, A. Tosun, A. Bener, *"AI-Based Models for Software Effort Estimation"*, 36th EUROMICRO Conference on Software Engineering and Advanced Applications (SEAA) 2010

- E. Kocaguneli, Y. Kultur, A. Bener, *"Combining Multiple Learners Induced on Multiple Datasets for Software Effort Prediction"*, (Student Paper) Proceedings of International Symposium on Software Reliability Engineering (ISSRE) 2009.

- E. Kocaguneli, A. Tosun, A. Bener, B. Turhan, B. Caglayan, *"Prest: An Intelligent Software Metrics Extraction, Analysis and Defect Prediction Tool"*, Proceedings of International Conference on Software Engineering and Knowledge Engineering (SEKE) 2009.

- Ayse Tosun, Ayse Bener, Ekrem Kocaguneli,*"BITS: Issue Tracking and Project Management Tool in Healthcare Software Development"*, Proceedings of International Conference on Software Engineering and Knowledge Engineering (SEKE) 2009.

- A. Bakir, E. Kocaguneli, A. Tosun, A.Bener and B. Turhan *"Xiruxe: An Intelligent Fault Tracking Tool"*, Proceedings of International Conference on Artificial Intelligence and Pattern Recognition (AIPR) 2009.

- Y. Kultur, E. Kocaguneli, A. Bener, *"Discovering Cost Related Features: Focus on Classification Models"*, Poster Paper in Empirical Software Engineering and Measurement (ESEM) 2009.

- E. Kocaguneli, A. Tosun, B. Caglayan, A. Bener, T. Aytac, B. Turhan, *"Bulutlarda Akilli Bir Yazilim Olcumleme, Hata Analiz ve Tahmin Araci: Prest"*, (in Turkish), 2nd National Symposium on Software Engineering (UYMS) 2009

- Y. Kultur, E. Kocaguneli, A. Bener, *"Domain Specific Phase by Phase Effort Estimation in Software Projects"*, Proceedings of International Symposium on Computer and Information Sciences (ISCIS) 2009.

Service

- Webmaster, Website of Promise repository (http://promisedata.org/) (2010 - 2011)
- Volunteer, West Virginia University International Home-start Closet (http://homestart.wvu.edu/) (2010 - 2012)
- Vice President, West Virginia University Turkish Student Organization (2010 - 2011)
- Team Leader, Implementing Circulating Capital Project for Finance Dept. of the Bogazici University: Responsible for a developer team of 30 computer engineering seniors (2008)

Skills

- Programs: WEKA (advanced), MS-Word (advanced), Excel (advanced), PowerPoint (advanced)
- Programming Languages: Java, MATLAB, R, C/C++, C#, SQL
- Languages:
  - English : Fluent spoken & written
  - German : Advanced (C2)
  - Turkish : Mother Tongue