

Ekrem Kocaguneli

1325 Stewartstown Road, Apt. G6, Morgantown, WV 26505 • (304)-685-9487 • ekrem@kocaguneli.com • www.kocaguneli.com

Education

- West Virginia University, (2010 - 2012 (December 25)), 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 Research Redmond-USA, (18.06.2012 - 7.9.2012)
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.
- West Virginia University Modeling Intelligence Lab.-USA, (15.01.2010 - Current)
Graduate Research Assistant: Researching on the applications of data mining, machine learning and data analytics solutions to emerging software estimation problems.
- Hong Kong Polytechnic University-Hong Kong, (01.07.2011 - 01.08.2011)
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, (14.07.2008 - 30.12.2009)
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.
- Inveon Software Development House-Turkey, (14.04.2008-11.07.2008)
Part-time software development specialist using ASP.NET: Worked as a developer for CRM applications using C# on an ASP.NET platform.
- SAP AG-Germany, (18.07.2007-28.09.2007)
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.
- BOSCH-Turkey, (03.07.2006-01.09.2006)

Intern for SAP-Archiving Project at Bosch IT Department: Carried out archiving project for different departments that use different SAP-ERP modules. Generated basic programs and reports using ABAP.

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.
- Aras Logistics, (2008), Team Member
An industry-research project to conduct the assessment of a legacy software and the software development processes: Derived and analyzed software quality metrics. Presented analysis results to upper management.
- 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, “*Software Effort Models Should be Assessed Via Leave-One-Out Validation*”, Journal of Systems and Software (to appear), 2013.
- E. Kocaguneli, T. Menzies, J. Keung, “*Active Learning for Effort Estimation*”, IEEE Transactions on Software Engineering (to appear), 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.

**Under Review
Journal
Publications**

- E. Kocaguneli, J. Keung, T. Menzies “Towards Theoretical Maximum Prediction Accuracy Using D-ABE”, submitted to IEEE Transactions on Software Engineering.

**Conference
Publications**

- 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 - Current)
- Vice President, West Virginia University Turkish Student Organization (2010 - 2011)
- Webmaster, Software Engineering Laboratory (www.softlab.boun.edu.tr) at Bogazici University (2008 - 2009)

- Team Leader, Implementing Circulating Capital Project for Finance Dept. of the Bogazici University: Responsible for a developer team of 30 computer engineering seniors (2008)
- Vice Editor, Steps-Magazine of Bogazici University Engineering Society (2004-2005)

Skills

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