8 References

[1] T. Cowling, "Model-driven development and the future of software engineering education," in *Software Engineering Education and Training (CSEE&T), 2013 IEEE 26th Conference on*, 2013, pp. 329–331.

[2] V. Chiew and Y. Wang, "A large-scale empirical study on the cognitive complexity of software," in *CCECE 2010*, Calgary, AB, Canada, 2010, pp. 1–4.

[3] "Leading reasons for software project failure according to developers worldwide, as of 2015." https://www.statista.com.

[4] C.-Z. Li, K.-H. Hsu, and G.-Y. Chen, "Discovering Aspects through Analyzing Code Changes in Software Development Histories," 2015, pp. 297–302.

[5] A. Dearle, "Software deployment, past, present and future," in *2007 Future of Software Engineering*, 2007, pp. 269–284.

[6] N. A. Razak and M. Ghazali, "Usability in software development: Frameworks comparison between IKnowU and user behavior analysis framework (UBAF)," in *Software Engineering (MySEC), 2011 5th Malaysian Conference in*, 2011, pp. 330–335.

[7] A. Carzaniga, A. Fuggetta, R. S. Hall, D. Heimbigner, A. Van Der Hoek, and A. L. Wolf, "A characterization framework for software deployment technologies," DTIC Document, 1998.

[8] J. L. B.-J. Nelson Martínez-Araujo and Alejandro González-García1, "Software Reuse and Continuous Software Development: A Systematic Mapping Study," *IEEE*, 2018.

[9] C. Boogerd and L. Moonen, "Evaluating the relation between coding standard violations and faultswithin and across software versions," in *Mining Software Repositories, 2009. MSR'09. 6th IEEE International Working Conference on*, 2009, pp. 41–50.

[10] M. Nawahdah and D. Taji, "Work in progress: Investigating the effects of pair-programming on students' behavior in an advanced computer programming course," in *2015 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE)*, Zhuhai, China, 2015, pp. 157–160.

[11] Prof. Bennett, "Math Model of Learning and Discovery," http://www.rpi.edu/~bennek/class/mmld/talks/lecture2-05.ppt, 14-Feb-2005.

[12] X. Li and Q. Wen, "A fast multi-pattern matching algorithm for anti-virus scanning," in *2011 4th IEEE International Conference on Broadband Network and Multimedia Technology*, Shenzhen, China, 2011, pp. 42–45.

[13] A. Yamaguchi, Y. Yamamoto, J.-D. Kim, T. Takagi, and A. Yonezawa, "Discriminative Application of String Similarity Methods to Chemical and Non-chemical

Names for Biomedical Abbreviation Clustering," in *2011 IEEE International Conference on Bioinformatics and Biomedicine*, Atlanta, GA, USA, 2011, pp. 544–549.

[14]   Y. Watanabe and K. Takahashi, "A fast structural matching and its application to pattern analysis of 2-D electrophoresis images," in *Proceedings 1998 International Conference on Image Processing. ICIP98 (Cat. No.98CB36269)*, Chicago, IL, USA, 1998, vol. 3, pp. 804–808.

[15]   S. Harrusi, A. Averbuch, and N. Rabin, "A Fast Compact Prefix Encoding for Pattern Matching in Limited Resources Devices," in *2010 Data Compression Conference*, Snowbird, UT, USA, 2010, pp. 533–533.

[16]   O. Pele and M. Werman, "Robust Real-Time Pattern Matching Using Bayesian Sequential Hypothesis Testing," *IEEE Trans. Pattern Anal. Mach. Intell.*, vol. 30, no. 8, pp. 1427–1443, Aug. 2008.

[17]   G. M. Landaut and S. Skiena, "Matching for Run-Length Encoded Strings," p. 9.

[18]   J. Heer and M. Agrawala, "Software design patterns for information visualization," *IEEE Trans. Vis. Comput. Graph.*, vol. 12, no. 5, pp. 853–860, 2006.

[19]   G. R. Higgie and A. C. M. Fong, "Efficient encoding and decoding algorithms for variable-length entropy codes," *IEE Proc. - Commun.*, vol. 150, no. 5, p. 305, 2003.

[20]   M. A. El Affendi and K. H. S. Al Rajhi, "Text encoding for deep learning neural networks: A reversible base 64 (Tetrasexagesimal) Integer Transformation (RIT64) alternative to one hot encoding with applications to Arabic morphology," in *2018 Sixth International Conference on Digital Information, Networking, and Wireless Communications (DINWC)*, Beirut, 2018, pp. 70–74.

[21]   R. W. P. King, "Electric fields induced in cells in the bodies of amateur radio operators by their transmitting antennas," *IEEE Trans. Microw. Theory Tech.*, vol. 48, no. 11, pp. 2155–2158, Nov. 2000.

[22]   JetBrains Team, "Resharper," *Resharper*. [Online]. Available: https://www.jetbrains.com/resharper/.

[23]   DevExpress Team, "CodeRush," *CodeRush*, 01-Aug-2018. [Online]. Available: https://www.devexpress.com/products/coderush/.

[24]   Telerik, "JustCode," *JustCode*. [Online]. Available: https://www.telerik.com/. [Accessed: 06-Aug-2018].

[25]   Microsoft, "Visual Studio," *Visual Studio*. [Online]. Available: https://visualstudio.microsoft.com/.

[26]   Whole Tomato Software, "Visual Assist," *Visual Assist*, 06-Oct-2018. [Online]. Available: https://www.wholetomato.com/.

[27]   Squared Infinity, "VSCommands," *VSCommands*. [Online]. Available: https://marketplace.visualstudio.com/items?itemName=SquaredInfinityJarekKardas.VSCommands14forVisualStudio2015.

[28] Wijesiriwardana, C., & Wimalaratne, P. (2017, May). On the detection and analysis of software security vulnerabilities. In 2017 International Conference on IoT and Application (ICIOT)(pp. 1-4). IEEE.

[29] Wijesiriwardana, C., & Wimalaratne, P. (2017, November). Component-based experimental testbed to faciltiate code clone detection research. In 2017 8th IEEE International Conference on Software Engineering and Service Science (ICSESS) (pp. 165-168). IEEE.

[30]   Microsoft, "Microsoft SQL Server," *Microsoft SQL Server*, 10-Oct-2018. [Online]. Available: https://www.microsoft.com/en-us/sql-server/sql-server-2016. [Accessed: 10-Oct-2018].

[31]   Microsoft, "Microsoft C#.NET," *Microsoft C#.NET*, 10-Oct-2018. [Online]. Available: https://docs.microsoft.com/en-us/dotnet/csharp/getting-started/introduction-to-the-csharp-language-and-the-net-framework. [Accessed: 10-Oct-2018].

[32] Wijesiriwardana, C., & Wimalaratne, P. (2019). Software Engineering Data Analytics: A Framework Based on a Multi-Layered Abstraction Mechanism. IEICE Transactions on Information and Systems, 102(3), 637-639.

[33] Wijesiriwardana, C., & Wimalaratne, P. (2018). Fostering Real-Time Software Analysis by Leveraging Heterogeneous and Autonomous Software Repositories. IEICE TRANSACTIONS on Information and Systems, 101(11), 2730-2743.