

- in software development,” 2018, arXiv:1801.06475.
3. K. Petersen, “Measuring and predicting software productivity: A systematic map and review,” *Inf. Softw. Technol.*, vol. 53, no. 4, pp. 317–343, 2011. doi: 10.1016/j.infsof.2010.12.001.
  4. E. Murphy-Hill et al., “What predicts software developers’ productivity?” *IEEE Trans. Softw. Eng.*, early access, Feb. 19, 2019. doi: 10.1109/TSE.2019.2900308.
  5. A. J. Albrecht, “Measuring application development productivity,” in *Proc. IBM Appl. Dev. Symp.*, 1979, pp. 83–92.
  6. A. Meyer, L. Barton, G. C. Murphy, T. Zimmermann, and T. Fritz, “The work life of developers: Activities, switches and perceived productivity,” *IEEE Trans. Softw. Eng.*, vol. 43, no. 12, pp. 1178–1193, 2017. doi: 10.1109/TSE.2017.2656886.
  7. M. Beller, G. Gousios, A. Panichella, S. Proksch, S. Amann, and A. Zaidman, “Developer testing in the IDE: Patterns, beliefs, and behavior,” *IEEE Trans. Softw. Eng.*, vol. 45, no. 3, pp. 261–284, 2019. doi: 10.1109/TSE.2017.2776152.
  8. A. Meyer, E. T. Barr, C. Bird, and T. Zimmermann, “Today was a good day: The daily life of software developers,” *IEEE Trans. Softw. Eng.*, early access, Mar. 13, 2019. doi: 10.1109/TSE.2019.2904957.
  9. A. Meyer, T. Zimmermann, and T. Fritz, “Characterizing software developers by perceptions of productivity,” in *Proc. Int. Symp. Empirical Softw. Eng. Meas.*, 2017, pp. 105–110. doi: 10.1109/ESEM.2017.17.
  10. D. Ford, T. Zimmermann, C. Bird, and N. Nagappan, “Characterizing software engineering work with personas based on knowledge worker actions,” in *Proc. Int. Symp. Empirical Softw. Eng. Meas. (ESEM)*, 2017, pp. 394–403. doi: 10.1109/ESEM.2017.54.
  11. R. Chen, Microspeak: DRI, the designated response individual Microsoft Devblog, 2015. [Online]. Available: <https://devblogs.microsoft.com/oldnewthing/20150825-00/?p=91741>
  12. C. Munson and S. John, *Engineering Measurement*. New York: Auerbach, 2003.

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