

# Caius Brindescu

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## Profile

I am a Software Engineer at Etleap. My work focuses on backend development, managing infrastructure, customer support and customer onboarding. I got my PhD at Oregon State University in 2020 where I worked on understanding how developers solve problems.

## Education

- 2013 - 2020      **PhD in Computer Science at Oregon State University**  
**Thesis:** *“An Investigation of the Effects of Merge Conflicts on Collaborative Software Development.”* I was advised by Dr. Carlos Jensen and Dr. Anita Sarma.
- 2012 - 2013      **PhD in Computer Science at University of Illinois at Urbana-Champaign**  
**Research Interests:** Software evolution and software design. I worked with Dr. Danny Dig.
- 2007 - 2011      **Bachelor of Science in Computer Engineering at “Politehnica” University, Timișoara**  
**Subjects studied:** Software Engineering, Object Oriented Programming, Operating Systems, Databases.

## Work Experience

- 06/18 - 09/18      Software Engineer at **Etleap Inc.**
- 09/19 - present      **Responsibilities:** Support customers during onboarding and trials, building and maintaining the core product and infrastructure
- 08/12 - 06/19      Graduate Assistant at **Oregon State University**  
**Responsibilities:** Conducting graduate research, teaching assistant for multiple courses, and teaching
- 03/12 - 07/12      Research Engineer at **Politehnica University of Timișoara** and Software Engineer at **Movidius Inc**  
**Responsibilities:** Joint project between the university and Movidius. My task was implementing an Eclipse based IDE to support multi-core debugging of embedded systems.
- Summer 2011      Internship at **University of Illinois at Urbana-Champaign** under the supervision of Danny Dig.  
**Responsibilities:** Extending the existing *ReLooper* tool with a way to solve data-races via privatization. It is built as an Eclipse plugin and uses the WALA framework for static analysis.

- Summer 2009 & Summer 2010 Internship at **Politehnica University of Timișoara** under the supervision of Radu Marinescu  
**Responsibilities:** Researching a method to use automated refactoring to solve bad smells in code. Determining the right refactoring strategy was done using metric-based algorithms. Looked for applications in the Refuse Parent Bequest design flaw. I also implemented a refactoring engine to be used to improve the design of software products.
- Summer 2008 Internship at **Incremental SRL**  
**Responsibilities:** Servicing computers

## Teaching Experience

- Winter 2019 Teaching assistant for Software Engineering II (CS 362) at Oregon State University  
**Responsibilities:** Office Hours and grading.
- Fall 2018 Instructor for Software Engineering I (CS 361) at Oregon State University  
**Responsibilities:** Prepare lecture material and assignments, organize and coordinate student projects, office hours and mentoring.
- Spring 2018 Teaching Assistant for Lab Studies in SE and HCI (CS 567) at Oregon State University  
**Instructor:** Anita Sarma  
**Responsibilities:** Office hours, grading and creating assignments. I am also supervising student teams for their class project.
- Winter 2018 Teaching Assistant for Software Engineering II (CS 362) at Oregon State University  
**Instructor:** Ali Aburasa  
**Responsibilities:** Office hours and grading.
- Fall 2017 Teaching Assistant for Software Engineering I (CS 361) at Oregon State University  
**Instructor:** Anita Sarma  
**Responsibilities:** Office hours, grading and preparing assignments.
- Summer 2017 Instructor for Web Development (CS 290) at Oregon State University  
**Responsibilities:** Preparing lecture material and designing the assignments, lecturing and office hours.
- Spring 2017 Teaching Assistant for Empirical Software Engineering (CS 569) and Advanced Software Engineering (CS 562) at Oregon State University  
**Instructor:** Anita Sarma and Danny Dig  
**Responsibilities:** Office hours and grading
- Winter 2017 Teaching Assistant for Mobile and Cloud Development (CS 498) and Empirical Software Engineering (CS 569) at Oregon State University  
**Instructor:** Justin Wolford and Anita Sarma  
**Responsibilities:** Office hours and grading
- Fall 2016 Teaching Assistant for Software Engineering I (CS 361) at Oregon State University  
**Instructor:** Alex Groce  
**Responsibilities:** Office hours and grading
- Spring, Summer 2016 Teaching Assistant for the online version of Senior Software Projects (CS 419) at Oregon State University  
**Instructor:** Benjamin Brewster  
**Responsibilities:** Monitoring the teams progress and grading

- Winter 2016 Teaching Assistant for Operating Systems I (CS 344) at Oregon State University  
**Instructor:** Benjamin Brewster  
**Responsibilities:** Office hours and grading
- Fall 2015 Teaching Assistant for Software Engineering I (CS 361) at Oregon State University  
**Instructor:** Anita Sarma  
**Responsibilities:** Office hours and grading
- Summer 2015 Teaching Assistant for the online version of Software Engineering I (CS 361) at Oregon State University.  
**Instructor:** Iftekhar Ahmed  
**Responsibilities:** Grading
- Spring 2015 Teaching Assistant for Software Engineering II (CS 362) at Oregon State University.  
**Instructor:** Alex Groce  
**Responsibilities:** Grading and holding office hours.
- Winter 2015 Teaching Assistant for Software Engineering I (CS 361) at Oregon State University.  
**Instructor:** Danny Dig  
**Responsibilities:** Creating and grading homework. Mentoring teams of four students and helping them make constant progress throughout the term.
- Fall 2014 Instructor for Seminar: Grad Intro (CS 507) at Oregon State University  
**Supervising professor:** Bella Bose  
**Responsibilities:** Holding a 50-minute lecture each week about topics relating to the graduate program (e.g. doing literature searches, preparing a presentation etc.)
- Spring 2013 Teaching Assistant for Software Engineering II (CS 428) at University of Illinois at Urbana-Champaign.  
**Instructor:** Danny Dig  
**Responsibilities:** Creating and grading homeworks. Mentoring teams of eight students so they make constant progress on their class project.
- Fall 2012 Teaching Assistant for Software Engineering I (CS 427) at University of Illinois at Urbana-Champaign.  
**Instructor:** Ralph Johnson  
**Responsibilities:** Creating and grading homeworks. Supervising student teams for the class project.

## Publications

### Journals

- TOSEM '20** **Using relative lines of code to guide automated test generation for Python**  
 Josie Holmes, Iftekhar Ahmed, Caius Brindescu, Rahul Gopinath, He Zhang, Alex Groce  
*ACM Transactions on Software Engineering and Methodology*, vol. 89, issue 4, pp. 1 – 39
- ESEJ '19** **An empirical investigation into merge conflicts and their effect on software quality**  
 Caius Brindescu, Iftekhar Ahmed, Carlos Jensen, Anita Sarma  
*Empirical Software Engineering Journal*, vol. 25, pp. 562 – 590

**ESEJ '19**      **The Life-Cycle of Merge Conflicts: Processes, Barriers, and Strategies**  
Nicholas Nelson, Caius Brindescu, Shane McKee, Anita Sarma, Danny Dig  
*Empirical Software Engineering Journal*, vol. 24, pp. 2863 -- 2906

## Conferences

**ICSME '20**      **Lifting the Curtain on Merge Conflict Resolution: A Sensemaking Perspective**  
Caius Brindescu, Yenifer Ramirez, Anita Sarma, Carlos Jensen  
*International Conference of Software Maintenance and Evolution, Adelaide, Australia, October 2020*

**ICSE '20**      **Planning for Untangling: Predicting the Difficulty of Merge Conflicts**  
Caius Brindescu, Iftekhhar Ahmed, Rafael Leano, Anita Sarma  
*International Conference on Software Engineering, Seoul, South Korea, November 2020*  
Acceptance rate: 21% (129/617)

**ESEM '17**      **An Empirical Examination of Code Smells and Their Impact on Collaborative Work**  
Iftekhhar Ahmed, Caius Brindescu, Umme Ayda Mannan, Carlos Jensen, Anita Sarma  
*International Symposium on Empirical Software Engineering and Measurement, Toronto, Ontario, Canada, November 2017.*  
Acceptance rate: 26% (74/273)

**FSE '16**      **Can Testedness be Effectively Measured?**  
Iftekhhar Ahmed, Rahul Gopinath, Caius Brindescu, Alex Groce, Carlos Jensen  
*International Symposium on the Foundations of Software Engineering, Seattle, WA, USA, November 2016.*  
Acceptance rate: 26% (74/273)

**ICSE '14**      **How Do Centralized and Distributed Version Control Systems Impact Software Changes?**  
Caius Brindescu, Mihai Codoban, Sergii Shmarkatiuk, Danny Dig  
*International Conference on Software Engineering, Hyderabad, India, May 2014*  
Acceptance rate: 20% (99/499)

## Blog Posts

**Nov 2022**      **How Etleap and Amazon Redshift Serverless optimize costs for ETL**  
Caius Brindescu, Maneesh Sharma, and Sathisan Vannadil  
*AWS Big Data Blog*

**Nov 2021**      **Integrate Etleap with Amazon Redshift Streaming Ingestion (preview) to make data available in seconds**  
Caius Brindescu, Jobin George, Maneesh Sharma, and TJ Green  
*AWS Big Data Blog*

**Dec 2020**      **How Etleap Integrates with Amazon Redshift Data Sharing to Provide Isolation of ETL and BI Workloads**  
Jobin George, Christian Romming, Neeraja Rentachintala, and Caius Brindescu  
*AWS Partner Network (APN) Blog*

## Service

I served as an external reviewer for the following conferences: ECOOP '15, ASE '14, ECOOP '13, ASE '17, ASE '17 Tool Demos, ICSE '19 and FSE '19. I was also a student volunteer for OOPSLA '14, FSE '16 and FSE '18.

I was on Program Committee for the Tool Track at SCAM '15, the Mining Challenge at MSR '17, the Showpiece track at VL/HCC '17 and the Industry Track at ESEC/FSE 2021.

## Invited talks

- 10/2014**      *How do Centralized and Distributed Version Control Systems Impact Software Changes?*  
Talk in CS 561 (Software Engineering) at Oregon State University. Host: Danny Dig
- 09/2012**      *Code Smells*  
Lecture in CS 427 (Software Engineering I) at University of Illinois at Urbana-Champaign.  
Host: Ralph Johnson