

Camilo ESCOBAR-VELÁSQUEZ

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Systems and Computing Engineering Department
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Education

Ph.D. (Student), Engineering, 2019 - Now.

Universidad de los Andes

Field: Automation of Software Engineering Tasks

Advisor: Mario Linares-Vásquez, Universidad de los Andes, Colombia

External Advisor: Gabriele Bavota, Università della Svizzera italiana, Switzerland

Ph.D. Research Fellowship, Informatics, Sept. 2020 - Aug. 2021.

Università della Svizzera italiana

Field: Automation of Software Engineering Tasks

Advisor: Gabriele Bavota

M.Sc. Software Engineering, 2017 - 2018.

Universidad de los Andes

Advisor: Mario Linares-Vásquez

Thesis Title: Automatic Analysis of Android Closed-Source apps to Support Software Engineering Tasks: The Mutation Testing Case

B.S. Systems and Computing Engineering, 2012 - 2016.

Universidad de los Andes

Minor: Mathematics

Advisor: Jose Tiberio Hernández

Research Experience

⊗ **Graduate Doctoral Teaching Assistant**

Systems and Computing Engineering Department - Universidad de los Andes

Jan. 2019 - Present

⊗ **Graduate Research Assistant**

Systems and Computing Engineering Department - Universidad de los Andes

Jan. 2017 - Dec. 2018

Teaching Experience

⊗ **Co-lecturer**

Automated Software Testing

Masters in Software Engineering - Coursera - Universidad de los Andes

Jan. 2021 - Jun. 2022

⊗ **Teacher Assistant**

Software Engineering for Mobile Apps

Masters in Software Engineering - Coursera - Universidad de los Andes

Jun. 2021 - Dec. 2021

⊗ **Teacher Assistant**

Automated Software Testing

Masters in Software Engineering - Universidad de los Andes

Jan. 2018 - Dec. 2020

⊗ **Lab Instructor**

Design and Analysis of Algorithms

Systems and Computing Engineering Undergraduate Program - Universidad de los Andes

Jan. 2017 - Jun. 2017

Honors and Awards

⊗ **Swiss Government Excellence Scholarships for Foreign Scholars**

Awarded Project: *Enabling Automated Software Engineering Tasks for Closed-Source Mobile Apps*

Sep.2020-Aug.2021 - Lugano, Switzerland

⊗ **Google Latin American Research Award**

Awarded Project: *Enabling Automated Software Engineering Tasks for Closed-Source Mobile Apps*

2020-2021 - Bello Horizonte, Brasil

⊗ **Google Latin American Research Award**

Awarded Project: *Enabling Automated Software Engineering Tasks for Closed-Source Mobile Apps*

2019-2020 - Bello Horizonte, Brasil

⊗ **ACM SIGAI travel scholarship**

Travel support to assist to The 34th International Conference on Automated Software Engineering

2019 - San Diego, CA, USA

⊗ **Google Latin American Research Award**

Awarded Project: *Enabling Automated Software Engineering Tasks for Closed-Source Mobile Apps*
2018-2019 - Bello Horizonte, Brasil

⊗ **1st Place Team Competition**

Testathon - Chapter 30

April 2019 - Bogotá, Colombia

⊗ **1st Place Hackaton Against Human Trafficking**

FIND: A Technological Environment to fight Human Trafficking

November 2018 - Bogotá, Colombia

Refereed Journal Publications

[J1] **Escobar-Velásquez, C.**, Mazuera-Rozo, A., Bedoya, C., Osorio-Riaño, M., Linares-Vásquez, M., Bavota, G., "*Studying eventual connectivity issues in Android apps*", in Empirical Software Engineering 2022 (EMSE'22)

[J2] Ravelo-Méndez, W., **Escobar-Velásquez, C.**, Linares-Vásquez, M., "*Kraken: A framework for enabling multi-device interaction-based testing of Android apps.*", in Science of Computer Programming 2021

[J1] **Escobar-Velásquez, C.**, Linares-Vásquez, M., Bavota, G., Tufano, M., Moran, K., Di penta, M., Vendome, C., Bernal-Cardenas, C., Poshyvanyk, D., "*Enabling Mutant Generation for Open- and Closed-Source Android Apps*", in IEEE Transactions on Software Engineering 2020 (TSE'20)

Refereed Conference Publications

[c6] Bello-Jiménez, L., **Escobar-Velásquez, C.**, Mojica-Hanke, A., Linares-Vásquez, M., "*Hall-of-Apps: The Top Android Apps Metadata Archive*", in Proceedings of the 17th International Conference on Mining Software Repositories 2020 (MSR'20) - Data Showcase Track, Seoul, South Korea, October 5-11, 2020.

[c5] Trujillo, M., Linares-Vásquez, M., **Escobar-Velásquez, C.**, Dusparic, I., Cardozo, N., "*Does Neuron Coverage Matter for Deep Reinforcement Learning? A Preliminary Study*", in Proceedings of the 2nd Workshop on Testing for Deep Learning and Deep Learning for Testing 2020 (DeepTest'20) - Research Track, Seoul, South Korea, October 5-11, 2020.

[c4] **Escobar-Velásquez, C.**, "*Source-Codeless Testing for Android Apps*", in Proceedings of the 13th IEEE International Conference on Software Testing, Validation and Verification 2020 (ICST'20), Doctoral Symposium, Porto, Portugal, October 24-28, 2020.

[c3] **Escobar-Velásquez, C.**, Osorio-Riaño, M., Linares-Vásquez, M., "*MutAPK: Source-Codeless*

Mutant Generation for Android Apps", in Proceedings of the 34th International Conference on Automated Software Engineering 2019 (ASE'19), Tool Demo, San Diego, CA, United States, November 11-15, 2019.

[c2] Ravelo-Méndez, W., **Escobar-Velásquez, C.**, Linares-Vásquez, M., *"Kraken-Mobile: Cross-Device Interaction-based Testing of Android Apps"*, in Proceedings of the 35th International Conference on Software Maintenance and Evolution 2019 (ICMSE'19), Tool Demo, Cleveland, OH, United States, October 2-4, 2019.

[c1] Linares-Vásquez, M., Bavota, G., **Escobar-Velásquez, C.**, *"An Empirical Study on Android-Related Vulnerabilities"*, in Proceedings of the 14th International Conference on Mining Software Repositories 2017 (MSR '17), Research Paper, Buenos Aires, Argentina, May 20-21, 2017.

Presentations

[p3] **Escobar-Velásquez, C.**, Osorio-Riaño, M., Linares-Vásquez, M., *"MutAPK: Source-Codeless Mutant Generation for Android Apps"*, in Proceedings of the 34th International Conference on Automated Software Engineering 2019 (ASE'19), Tool Demo, San Diego, CA, United States, November 11-15, 2019.

[p2] Ravelo-Méndez, W., **Escobar-Velásquez, C.**, Linares-Vásquez, M., *"Kraken-Mobile: Cross-Device Interaction-based Testing of Android Apps"*, in Proceedings of the 35th International Conference on Software Maintenance and Evolution 2019 (ICMSE'19), Tool Demo, Cleveland, OH, United States, October 2-4, 2019.

[p1] **Escobar-Velásquez, C.**, Linares-Vásquez, M., *"Enabling Automated Software Engineering Tasks for Closed-Source Android Apps"*, 70th Anniversary of Research and Creation at Universidad de los Andes, Bogotá, Colombia, November 21, 2018.

Professional Service

Organizing Comitee

⊗ The 39th International Conference on Software Maintenance and Evolution - ICSME'23, Bogotá, Colombia.

⊗ The 1st Languages and Tools for Next Generation Testing Workshop - LANGETT'20, Nov 9, 2020, Sacramento, CA, USA.

Program Comitee

⊗ The 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering - ESEC/FSE'21, (Virtually). *Artifacts Track*.

⊗ The 30th IEEE/ACM International Conference on Program Comprehension - ICPC'2022, May

16-17, 2022, Pittsburgh, PA, USA - *Tool Demonstrations*

⊗ The 9th IEEE/ACM International Conference on Mobile Software Engineering and Systems - MOBILESoft'22, May 22-23, 2022, Pittsburgh, PA, USA. *Tool Demo and Mobile Apps Track*.

⊗ The 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering - ESEC/FSE'21, (Virtually). *Artifacts Track*.

⊗ The 18th International Conference on Mining Software Repositories - MSR'21, May 23-24, 2021 (Virtually). *Shadow PC - Research Track*

Student Volunteer

⊗ The 13th IEEE International Conference on Software Testing, Verification and Validation - ICST'20, Oct 24-28, 2020, Porto, Portugal.

⊗ The 36th IEEE International Conference on Software Maintenance and Evolution - ICSME'20, Sep 27 - Oct 3, 2020, Adelaide, Australia.

⊗ The 42st ACM/IEEE International Conference on Software Engineering - ICSE'20, July 6-11, 2020, Seoul, South Korea.

⊗ The 34th IEEE/ACM International Conference on Automated Software Engineering - ASE'19 - November 2019 - San Diego, CA, USA.

⊗ The 41st ACM/IEEE International Conference on Software Engineering - ICSE'19 - May 2019 - Montreal, Canada.

⊗ The 34th IEEE International Conference on Software Maintenance and Evolution - ICSME'18 - October 2018 - Madrid, Spain.

Talks

⊗ **Enabling Automated Software Engineering Tasks for Closed-Source Android Apps**
70th Anniversary of Research and Creation at Universidad de los Andes - November 2018 - Bogotá, Colombia