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| Grzegorz ”Greg” Kakareko | | | | | |
| Cell Phone: 850-570-4683  Email: [g.kakareko@gmail.com](mailto:g.kakareko@gmail.com)  Web: https://g-kakareko.github.io/ | | | | | |
| EXPERIENCES | | | | | |
| **Head of Artificial Intelligence & Machine Learning, Spire Global, Boulder** | | | | | October 2021 - Present |
| * Technical supervision and active development of all AI/ML projects in Spire. * Lead and manage a team of 6 individuals that included machine learning engineers, applied scientists, and software engineers. * Active model development, deployment, monitoring and testing of Spire machine learning products. * Set development priorities and timelines, with a focus on developing solutions that directly support Spire’s core businesses, such as Space, Weather, Maritime, and Aviation. * Interface with customers and stakeholders, providing insights into products and services. * Collaborate with peers on the Executive Leadership Team (ELT) to develop and execute broad-scale business strategy. | | | | | |
| **Senior Machine Learning Engineer, Spire Global, Boulder** | | | January 2020 – October 2021 | | |
| * Developed Spire weather machine learning platform that includes components like infrastructure, deployment, monitoring, and verification. * Developed machine learning capabilities for Spire space business including active training, predictions, and monitoring on Spire satellites on orbit. * Mentored and supervised junior members of the machine learning team. | | | | | |
| **Data Scientist, Risk Management Solutions, Tallahassee** | | | | July 2017 - September 2019 | |
| * Developed machine learning products for insurance and reinsurance industries. * Developed machine learning pipelines for global weather data collection. * Developed and maintained PostgreSQL database. * Developed verification and monitoring systems for machine learning models. | | | | | |
| **Graduate Research Assistant, Florida State University, Tallahassee** | | | May 2015 - December 2019 | | |
| * Developed machine learning algorithms for better data handling, damage detection, prognostics and damage classification. * Develop innovative machine learning approaches that change the behavior of coastal businesses and/or residents so that they are more resilient when making decisions and taking actions in a risk-prone environment. | | | | | |
| **Teaching Faculty, Warsaw University of Technology, Warsaw** | | | | October 2014 - April 2015 | |
| * Instructor for Programming II - introduction to C++course. This course introduces students to object-oriented programming, recursion, data structures, and basic search algorithms with the aim of expanding their programming skills. * Instructor for Computer Engineering Graphics course. The course's objective was to introduce students to advanced computer science techniques for 3D modeling. | | | | | |
| EDUCATION | | | | | |
| **M.S.** | **Florida State University** | May 2016 - December 2019 | | | |
| Thesis: Convolutional Neural Networks for Hurricane Road Closure Probability and Tree Debris Estimation. | | Computer Science | | | |
| **Ph.D.** | **Florida State University** | May 2015 - November 2019 | | | |
| Dissertation: Multi-scale Hurricane Loss Estimation. | | Structural Engineering | | | |
| **M.S.** | **Warsaw University of Technology** | October 2013 - March 2015 | | | |
| Thesis: Effective Stiffnesses of Plates of Repetitive Structure. | | Structural Mechanics and Computer Aided Engineering | | | |
| **B.S.** | **Warsaw University of Technology** | October 2009 - July 2013 | | | |
| Thesis: Dynamic Analysis of the Footbridge Considering Different Dampers Solutions. | | Structural Engineering | | | |
| PUBLICATIONS | | | | | |
| Farr A.J., I Petrunin, **Kakareko, G.**, Carpet J., Self-Supervised vessel detection from low resolution satellite imagery, AIAA SCITECH 2022 Forum | | | | | |
| **Kakareko, G.**, Jung, S., Ozguven, E.E., Estimation of tree failure consequences due to high winds using convolutional neural networks, International Journal of Remote Sensing | | | | | |
| **Kakareko, G.**, Jung, S., Mishra, S., Vanli, O.A., 2020. Bayesian capacity model for hurricane vulnerability estimation. Structure and Infrastructure Engineering, 1-11. | | | | | |
| **Kakareko, G.**, Jung, S., Vanli, O.A., 2019. Hurricane Risk Analysis of the Residential Structures Located in Florida. . Sustainable and Resilient Infrastructure, 1-15. | | | | | |
| Kocatepe, A., Ulak, M.B., **Kakareko, G.**, Ozguven, E.E., Jung, S., Arghandeh, R., 2019. Measuring the accessibility of critical facilities in the presence of hurricane-related roadway closures and an approach for predicting future roadway disruptions. Natural Hazards 95, 615-635. | | | | | |
| Mishra, S., Vanli, O.A., **Kakareko, G.**, Jung, S., 2019. Preventive maintenance of wood-framed buildings for hurricane preparedness. Structural Safety 76, 28-39. | | | | | |
| Amirinia, G., Jung, S., **Kakareko, G.**, 2019. Effect of piezoelectric material in mitigation of aerodynamic forces, Sensors and instrumentation, aircraft/aerospace and energy harvesting, volume 8. Springer. | | | | | |
| **Kakareko, G.**, Jung, S., Vanli, O.A., Tecle, A., Khemici, O., Khater, M., 2017. Hurricane loss analysis based on the population-weighted index. Frontiers in Built Environment 3, 46. | | | | | |
| CONFERENCE PRESENTATIONS | | | | | |
| Jung. S., Amirinia, G., **Kakareko, G.** 2019, Analysis of hurricane wind effects on buildings and community, Structures Congress 2019. | | | | | |
| Kocatepe, A., Ulak, M.B., **Kakareko, G.**, Pinzan, D., Cordova, J., Ozguven, E.E., Jung, S., Arghandeh, R., Sobanjo, J.O., 2018. Assessment of emergency facility accessibility in the presence of hurricane-related roadway closures and prediction of future roadway disruptions. Transportation Research Board 97th Annual Meeting | | | | | |
| **Kakareko, G.**, Jung, S., Vanli, O.A., Tecle, A., Khemici, O., Khater, M., 2017. Hurricane loss analysis of wood-frame structures in Florida. The 13th Americas Conference on Wind Engineering (13ACWE). | | | | | |
| **Kakareko, G.**, Jung, S., Ozguven, E.E., Weresa S., 2017. A new approach for road closure probability estimation caused by hurricane winds. Engineering Mechanics Institute Conference 2017. | | | | | |
| **Kakareko, G.**, Jung, S., Vanli, O.A., Mishra, S., Vulnerability estimation of low-rise buildings against wind hazard considering uncertainty in building components, Engineering Mechanics Institute 2016. | | | | | |
| INVITED SPEAKER | | | | | |
| Keynote speaker for ECCV 2022 - 2nd Workshop on AI for Space <https://aiforspace.github.io/2022/>  Topic: Challenges of machine learning systems deployed in space. | | | | | |
| SCHOLARSHIPS & AWARDS | | | | | |
| Federal Alliance for Safe Homes (FLASH) Scholarship. | | | | 2016 | |
| Dean’s Scholarship for Sport Achievements. | | | | 2009-2015 | |
| Dean’s Scholarship for Academic Achievements. | | | | 2010-2012 | |
| President of the Bialystok City Scholarship for Sport Achievements. | | | | 2012 | |
| Award from President of the Bialystok City (Diligentiae Medal) for city promotion. | | | | 2010 | |