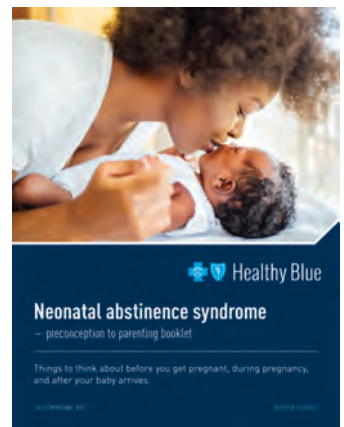
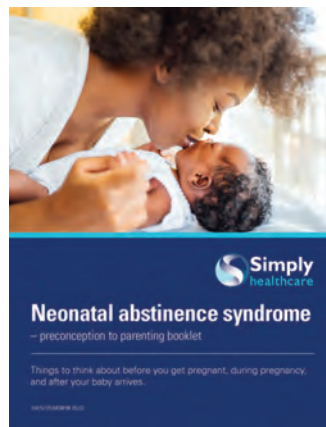
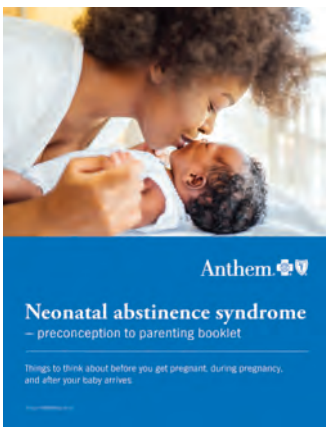
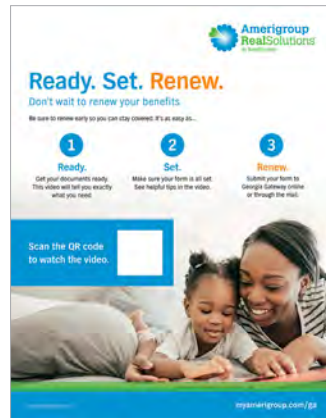
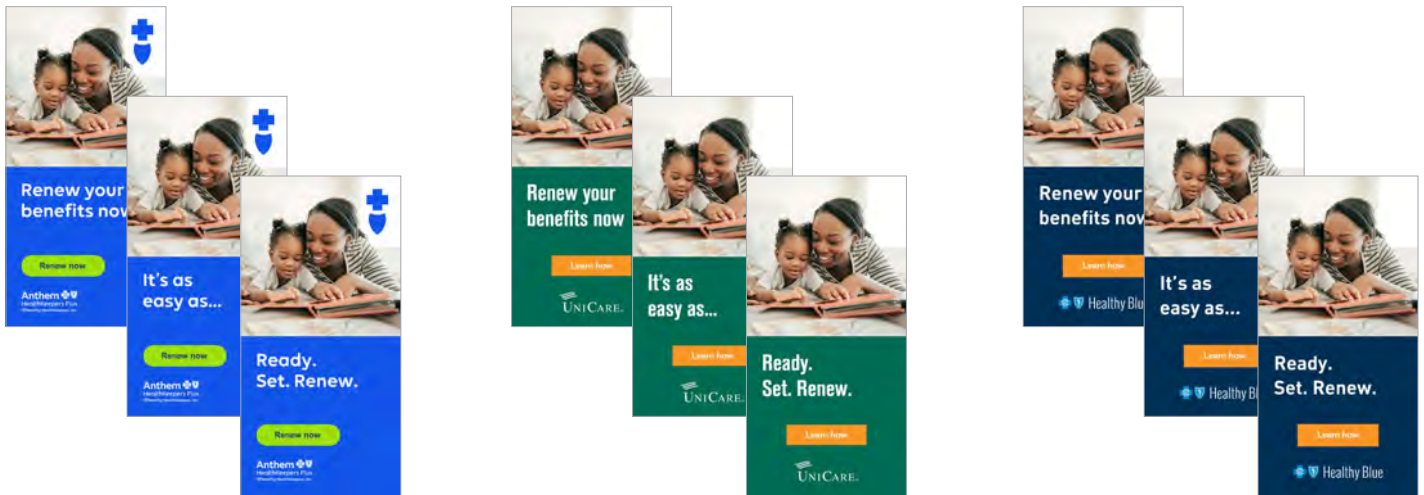


Recent work



Elevance Health/Anthem, Inc. — After the “Blue Brand” (Anthem in the name, Anthem branding) template had been finalized for a deliverable, I would prepare versions for the different markets/brands in the Elevance group. Above are examples of web banners and posters for a retention campaign, and covers for a neonatal brochure prepared for various markets.

Part-time chef.
Full-time mom.
This is Medicaid.

See if you qualify.
Wellpoint.

Gig worker.
Aspiring artist.
This is Medicaid.

See if you qualify.
Wellpoint.

Recent grads.
Puppy parents.
This is Medicaid.

See if you qualify.
Wellpoint.

Part-time chef.
Full-time mom.
This is Medicaid.

See if you qualify.
Healthy Blue | HERITAGE HEALTH

Gig worker.
Aspiring artist.
This is Medicaid.

See if you qualify.
Healthy Blue | HERITAGE HEALTH

Recent grads.
Puppy parents.
This is Medicaid.

See if you qualify.
Healthy Blue | HERITAGE HEALTH

Part-time chef.
Full-time mom.
This is NJ FamilyCare.

See if you qualify.
Amerigroup

Gig worker.
Aspiring artist.
This is NJ FamilyCare.

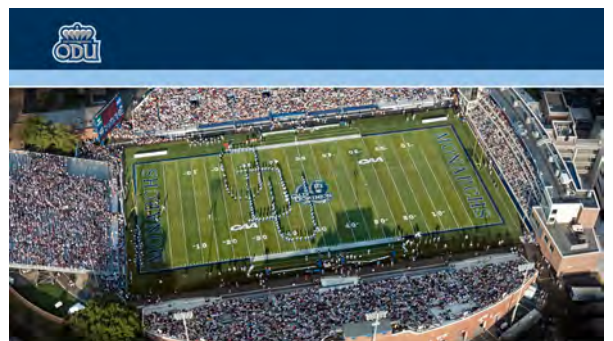
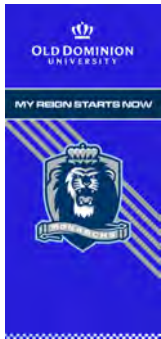
See if you qualify.
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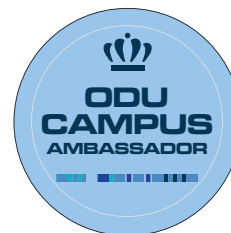
See if you qualify.
Amerigroup

Elevance Health/Anthem, Inc. — “This is Medicaid” web banners for various markets.

Previous work



Old Dominion University — In 2021 while working with the Undergraduate Admissions team at ODU, I created various deliverables for prospective and new students and their families, including phone and desktop wallpapers, web banners, social media images, and other items such as buttons for the campus ambassadors.





Cadence — As well as producing collateral, imagery for social media posts and email blasts, presentations, and diagrams for blog and other materials on a daily basis, in late 2019 and early 2020 I worked with the rest of the Creative team on a rebrand. I produced the interim and final Brand Guidelines based on the original rough PDF provided by an outside agency, incorporating the evolving Brand elements along the way. I also worked to secure a very competitive bid for printing the guidelines from one of several vendors we work with as well as checking with several others.



Online Support badges — I worked with the Online Support team and our Brand Director to produce a set of badges for the various levels of Online Support achievement. This project has several iterations and involved a good deal of communication with the Support and Training team to make sure we provided something that worked for them and was within brand.



Cadence webinar banner ads — I produced this series of banner ads to promote a Cadence webinar using the product imagery for the tool being presented in the webinar.



Cadence print ad — I produced this ad for Cadence's APAC regional offices.

TECHNICAL BRIEF

cadence

Finding Hidden Randomization Tricks with Machine Learning

The Cadence® Xcelium™ Logic Simulator with Machine Learning (Xcelium ML) now makes randomized regressions faster. Xcelium ML monitors on-going regressions and uses proprietary machine learning algorithms to identify how random values generated by the simulator influence coverage of the regressions. It then produces instructions of randomization actions for user-provided tests, together with a proportion of random seeds to be used for the individual tests. The randomization engine of the Xcelium Logic Simulator uses the instructions in subsequent regressions, which are able to make the coverage faster.

Pros and Cons of Randomization

Randomization of test patterns improves the efficiency of producing many sequences to a design under test. It is especially effective for stressing the design with scenarios that are hard for a human to create directly, helping expose bugs in the design and creating different ways to realize important design conditions.

The industry has invested decades on devising methods of randomized verification that work in practice. Languages have been developed to efficiently write tests and testbenches with random variables, simulators have been designed to assign random values for broad exploration of scenarios while ensuring repeatability with committed seeds, the coverage model concept has been honed to ensure design features are properly verified, and the practice of writing reusable tests has gained industry prominence. These are all examples of the key ingredients that constitute state-of-the-art methods.

With randomization, you do not need to think about the complete details in creating test sequences. It provides, not only efficiency in creating and reusing tests but also effectiveness in stressing the design in a manner difficult to conceive by humans. However, this advantage has a direct consequence in that the verification engineer no longer knows exactly how particular test scenarios have been created. We often take the position that this consequence itself should be regarded as yet another advantage. In coverage-driven verification, for example, you might want to focus on what to cover, leaving the tools to find out how to cover it.

While this sounds attractive, it inevitably reduces the understanding of what is going on in the simulation of your tests, which could become problematic when you compose a regression from these tests. A basic question, such as "How many random seeds should be assigned to each test?", is hard to answer. There is overlap among some of the tests, but it is hard to tell what kind of overlap is present when the tests are executed under various seeds. Consequently, you can no longer confidently reduce the number of seeds or reuse specific tests from a regression, while still ensuring the quality of the regression. As a result, a regression gets bigger and bigger, increasing its complexity and execution time as the verification project proceeds.

Of course, with the current scale of designs and verification environments, it is not possible to fully understand what is going on in a regression. It is also counterproductive to decide not to use randomization. However, you need a solution to manage the increasing complexity of the regression (grey bars) and about two-thirds of the original (yellow bars), respectively. The graphs in the middle of the figure show the number of random seeds that were executed, when monitored at each intermediate point.

The remaining 0.9% of the coverage space was hard to hit. The coverage graphs on the left show how slow it was to increase the coverage, with respect to the number of seeds required for these two intermediate points. Nevertheless, as shown with the yellow bars, the Xcelium ML regression exceeded the coverage of the original regression at 66% of the original CPU time.

Conclusion

By extracting knowledge from regression data using machine learning and capturing that knowledge in statistical models, Xcelium ML produces concise regressions with special instructions to achieve the coverage more efficiently. The Xcelium Logic Simulator was extended with an ML interface that interprets the instructions at run time, enabling faster regression with the same coverage.

Further Information

For more information about Cadence's Xcelium ML, contact info@cadence.com.

Header in electronic design and computational expertise, using their Intelligent Pega to turn design concepts into reality. Cadence customers are the world's most innovative companies, delivering world-leading electronic products from chips to the most dynamic market applications. www.cadence.com

Cadence Technical Brief — collateral promoting product launch

cadence

Automotive Design Summit 2019

Cadence Headquarters, San Jose, CA — July 30

12:30pm – 1:45pm Lunch and Networking

2:00pm – 3:00pm Today's Autonomous Vehicles System Design

3:00pm – 5:00pm Closing Remarks and Networking Reception

1:45pm – 2:00pm t Schweiger, Director, Automotive Solutions, Cadence
Kishonti, CEO, Almotive

2:00pm – 2:15pm J Khouri, VP and GM, Automotive, NXP

2:15pm – 2:30pm Aender, VP, Business Development, Green Hills Software

2:30pm – 2:45pm t Day, Director, Automotive Solutions and Platforms, Arm

2:45pm – 3:00pm Immed Ismail, PhD Fellow IEEE, State University

3:00pm – 3:15pm t Schweiger, Director, Automotive Solutions, Cadence

Cadence PPT slides — Automotive Summit agenda for monitors/PPT



Cadence landing page — Aerospace and Defense landing page banner



Cloudera — As well as producing collateral, presentations, and diagrams for blog and other materials, I have designed a one-off trade show booth for Cloudera’s Strata+Hadoop World Singapore presence in 2015, and cocktail and wine signs, postcards, and other materials for other Cloudera S+HW shows.





VMware collateral — For the first technical journal by VMware, I produced the interiors and diagrams as well as the final cover files, designing the interior as an evolution of their white paper deliverable. The diagrams were designed based on VMware's corporate style from line art figures in the Word docs provided for the journal.

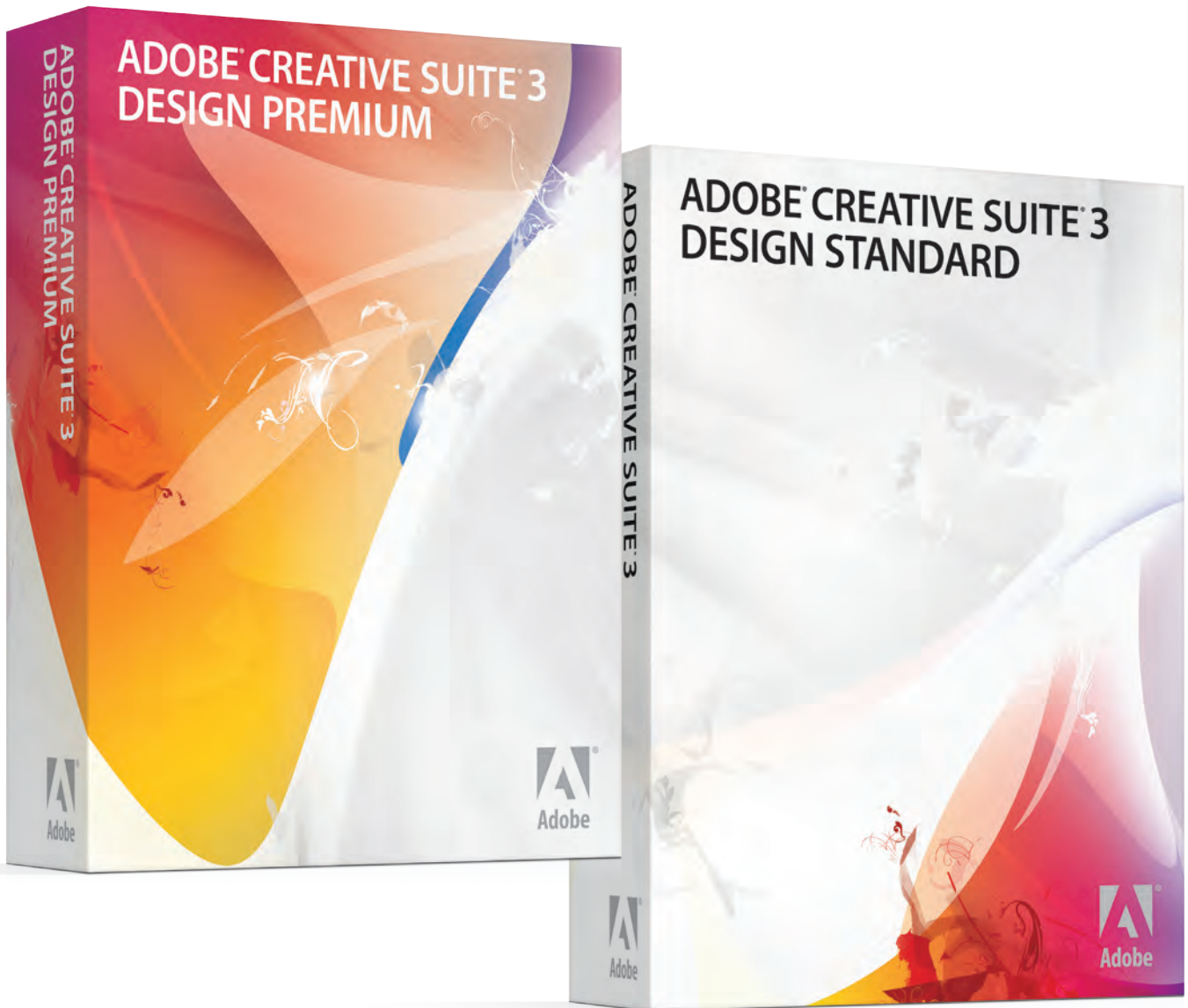
For the first in a line of high-end printed brochures for the VMware Marketing Services team, I worked closely with the art director and writer to produce final files, bringing together stock imagery, in-house diagrams and brand elements for this brochure as well as making several revisions to the content as it was being produced.





Oracle out of home and halo events — at Oracle I worked with the Advertising team to produce various out of home units including billboards, bus boards, elevator wraps, global airport advertising, and units at trade shows Oracle participated in or sponsored.





Adobe CS3 packaging — I worked with Adobe's Print Operations team to finalize packaging templates (sleeves, kraft boxes, and inserts) based on new environmental packaging, as well as coordinating the revisions and final files for all the product IDs for the CS3 line with the outside design agency.

