# Todd Owen

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## Skills

- C | C++ | Python | PERL | TCL | JavaScript | Django | API Development | Git | BASH | Cshell | MAKE
- HSPICE | PrimeSim | XA | Spectre | AFS | ClockEdge | PV | Tempus | PrimeTime | Virtuoso ADE
- Modeling | Transistor Reliability | BTI | HCI | TDDB | ESD | Self-heating | URI | MOSRA | OMI | BSIMCMG
- Variation Analysis | Timing Sign-off | Characterization | Regression Testing | Advanced Debug | SDL Practices | CI/CD

## Experience

| CAD Software Engineer | Intel | *Hillsboro, OR* | **1/2022 - Current** |
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- Analog and digital aging consultant for product teams using Intel Foundry
- Lead architect and developer for Intel's SPICE level device aging libraries – URI, MOSRA, OMI
- Implemented advanced BTI, HCI, and TDDB models in cutting edge process nodes (e.g. Intel 18A, 14A)
- Delivered detailed specifications to EDA vendors for modeling related enhancements.
- Developed and coordinated multi-tier testing plans across three business groups.
- Built in-house advanced multi-layered regression system incorporating unit, system, and result level checks.
- Introduced CI/CD and SDL practices into all code repositories owned – threat analysis, fuzzing, pull requests, reviews, test, improvement.
- Moved all enhancement and bug tracking to JIRA system. Distributed tasks to Jr engineers and led all code reviews.
- Developed team ChatGPT / prompt-engineering guidelines.
- Deployed aging PV derate flows using PrimeTime and Tempus. Enhanced analysis using launch, capture, and data paths.
- Advanced STD cell characterization for aging using compact timing power models.
- Expert user – HSPICE, PrimeSim, XA, Spectre, AFS, PrimeTime, Tempus, Virtuoso ADE, GIT, GCC, Coverity, LibFuzz
- Member of the CMC OMI work group.

| Pre-Si Q&R Engineer | Intel | *Hillsboro, OR* | **1/2004 - 5/2015** |
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- Developer of specialized tools and tool flows related to BTI, HCI, EM, SH, ESD, and soft-error.
- Moved reliability applications from QRE to designer, allowing earlier risk assessments.
- Worked closely with IP development teams to drive and develop advanced reliability simulation methods.
- Led advanced statistical EM analysis, leading to more accurate product DPM estimates across generations of products.

| First Officer | Wheels Up | *Portland, OR* | **1/2019 - 12/2021** |
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- Successful completion of over 1200 flight hours and 800 flights on the BE-300. No flight incidents or FAA pilot deviations.
- Consistent, priority-one service to all customers, including prominent sport, political, and entertainment icons.
- Developed Python/Django flight tracking tool with DB of company and competitor flights for statistical analysis.
   **Directly demoed tool to CEO and CTO.** Offered ½ Dev ½ Flight role, directly overseeing rollout of electronic mx logbooks.

## Education

| Masters of Science | University of Washington | *Seattle, WA* | **9/2001 - 9/2003** |
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- Electrical Engineering. VLSI and embedded systems focus.
- Masters Project "FPGA Implementation of Error Correction and Improved SPIHT Compression for NASA Hyperspectral Images"

## Projects

- **Fleet Tracker:** Semi real-time flight tracker and online flight statistics portal (Django, Python, JavaScript, Google Maps APIs). Previous hosting on Google Cloud and AWS. Code repo on GitHub (2020-2022)

## Others

- **Shotokan Karate**: 3rd degree black-belt JKA
- **Certifications**: ATPL, FAA Radio License, HAM Radio License, CFI, CFII, BE-300 Type Rating