Deesign Electronics Website Layout:

Pages:

Home

* Hero with title and subtitle (picture to be decided upon later)
  + CTA
* Features of site
  + Design guidelines (helpful to get to simulation and construction faster and smarter)
  + Multiple disciplines (analog electronics, power electronics)
  + Intuition aiding (equations of design can be directly used to build circuitry)
* Example design
* Testimonials (when I have them)
* Footer

Design Center (MDX pages) – Using Auth0 for authentication, protected with Stripe for payment

* Sidebar, containing all designs
* Landing Page, expanded side bar but identical information
* SMPS
  + CCM
    - Inductor sizing equation (idealized)
    - Capacitor sizing equation (idealized)
    - Efficiency equation (non-ideal, taking dc losses into account)
    - Control Equations (non-ideal, taking DC losses into account)
      * Output Impedance
      * Control to Output Voltage
      * Vin to Vout transfer
  + DCM
    - CCM/DCM Mode Boundary Equation
    - Efficiency Equation (non-ideal, taking dc losses into account)
    - Control equations (non-ideal, taking DC losses into account)
      * Output Impedance
      * Control to Output Voltage
      * Vin to Vout transfer

Contact

* Standard Contact form
* Potentially offer free usage of site for 1 month in exchange for a testimonial (or feedback on site)

Account (to be set up later)

Expected components:

Top Level:

Layout (to contain navbar, footer)

Navbar

Footer

Auth

PrivateAuthRoute

PrivateStripeRoute (?)

Home page:

* HomeHero
* Features
* Testimonials (when I have them)
* ExampleDesign (could be just imported from actual MDX pages, need to verify if this is possible)

Design Center:

* Equation
* Picture
* BodePlot
  + Can hold multiple bode subplots, pull components from multiple equations and graph bode plots given component values.
* EquationSolver
  + Similar to the bode plot, it can take in an equation and provide a solution to the equation given the correct input parameters.

Plan of Action:

SOLVE ONE PROBLEM AT A TIME, COME BACK HERE AFTER EACH PROBLEM IS SOLVED AND START PLANNING TO SOLVE THE NEXT ONE.

Tech Stack:

GatsbyJS (base)

MDX for pages in the design center

Auth0 for authentication

Stripe for payment acceptance

ChartJS for bode plots

ChartJS for waveforms (? – maybe)

Things to do:

1. Create new Gatsby project
2. Get navigation working between the 3 main pages,
3. Install MDX.
4. Get backend working for design center pages using MDX
   1. Get barebones lorem ipsum to be generated
   2. Work equation component so that real equations can be added to the website.
   3. Save Bode plot component for later, that will be difficult and should be worked when progress has already been made to the blog pages themselves.