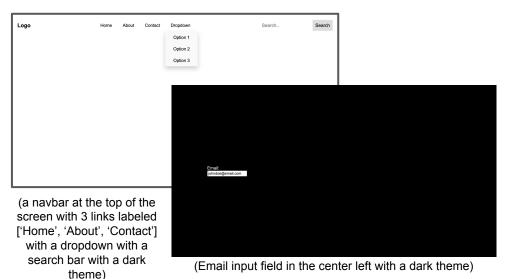
# Oct 15th Research Update: More Data, Fine Tuning Again

### **More Training Data**

- User interfaces with top Navbars
- User interfaces with various input field types located around the screen



#### **Fine Tuning Again**

- Started from base SDXL model again, though with 400 images (30 images previously)
- Changed batch size from 1 → 4
  - I ran out of GPU memory if I increased this
- 800 train steps, saved at 400 and 800
- Learning rate still at 5e-6
- Trained for 2 hours
- Average loss didn't seem to stabilize, but I also believe I was overfitting on my input data.

#### Issue

- Having trouble using both GPUs for training script freezes
  - I set accelerate config to use multiple GPUS and add –multi\_gpu and –num\_processes flags to train script

## New Training Data Content

### **Navigation Bars**

- Logo
- Page links
- Dropdowns with a few options
- Search bar

I iterated through different combinations of these elements on the screen

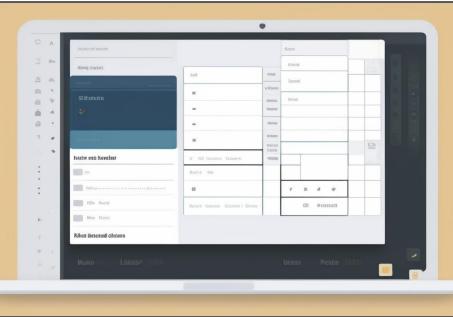
#### **Input Elements**

- Button
- Checkbox
- Date, datetime
- Email
- File upload
- Radio button
- Submit button
- ...

These were placed at different locations around the screen (ex: top-left, center-right, bottom center...) **Prompt 1:** A user interface with a navbar on the top with a grid with 2 rows and 2 columns below, and two input fields in the top left grid block for "Username" and "Password"

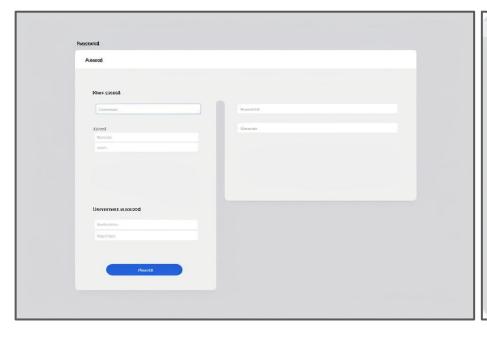
#### **Base Model**

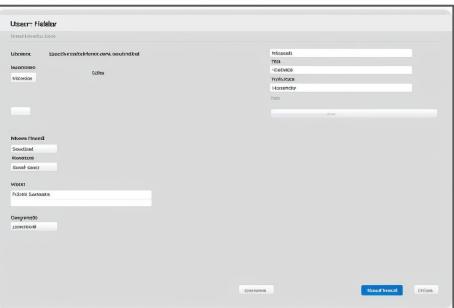




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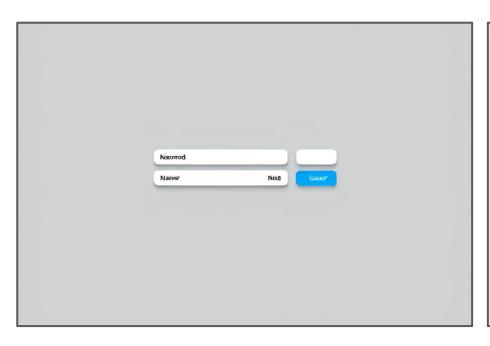
### **After 400 Training Steps**

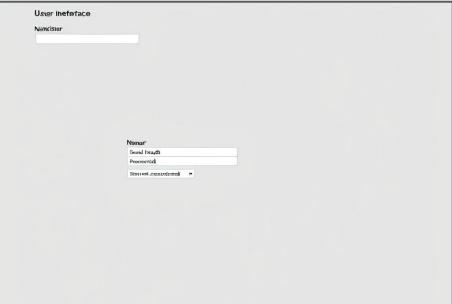




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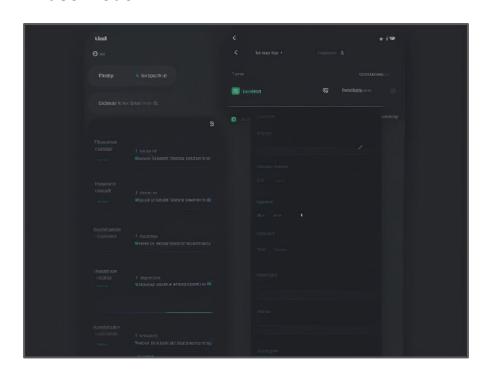
### **After 800 Training Steps**

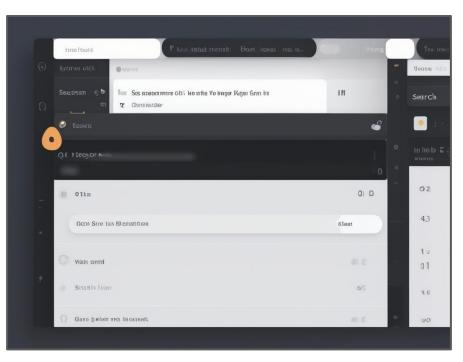




**Prompt 2:** A user interface with a navbar at the top of the screen. There is a Logo on the left and a searchbar on the right. near the searchbar there is a dropdown with 3 options. Dark theme

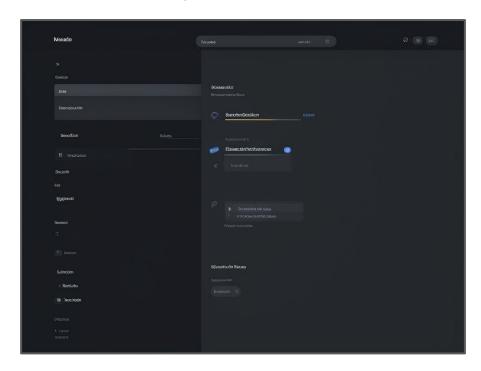
#### **Base Model**

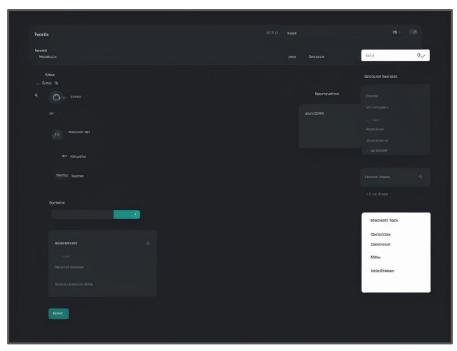




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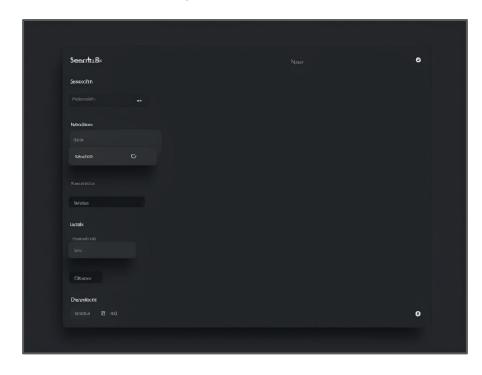
## **After 400 Training Steps**

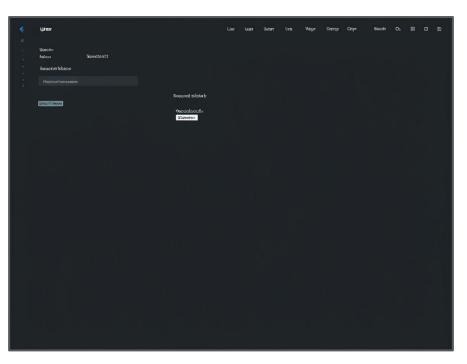




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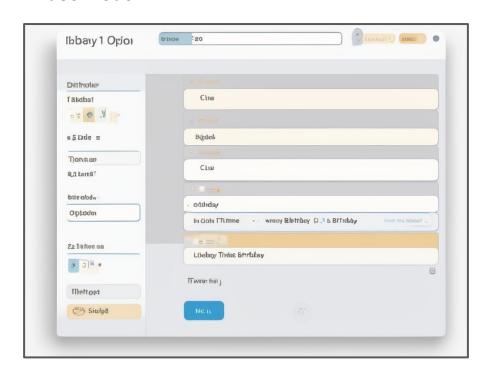
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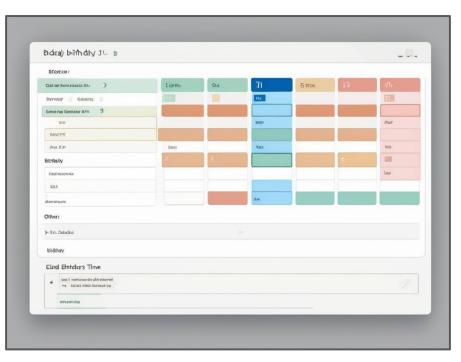




**Prompt 3:** a user interface with 3 columns. The left column has 3 checkboxes for selecting "Option 1", "Option 2", and/or "Option 3". The center column has a datetime input field to select your "Birthday" and the right column has an input field to upload a file. Light theme

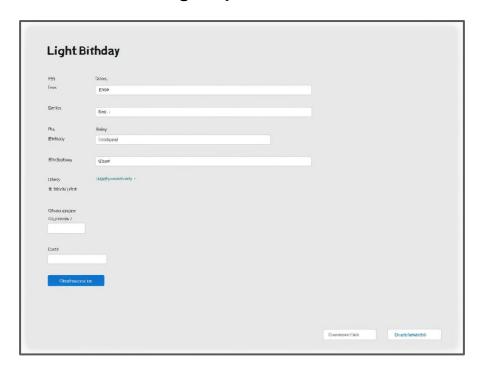
#### **Base Model**





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## **After 400 Training Steps**

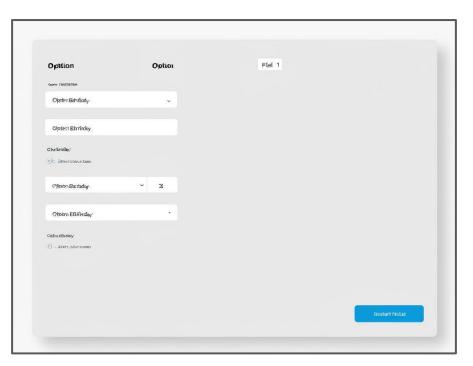




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### **After 800 Training Steps**





# **Observations**

With more training, UIs became very simplistic, matching my training data. They did not consistently match the prompt but showed a slight improvement from the base model in generating reasonable navbars, search bars, and general html-looking forms.

Components did not overlap or collide after training, unlike the base model. The model created slightly more accurate text labels for input fields, but was still unreadable.