Item: the **Bun$_G$ Stack**

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I don't even know where to begin. There's a discussion of stacks and they talk about $\mathrm{Bun}(G)$.

I don't know what it is, or what it's elements are or why it is important. Google and wikipedia don't really help since they pre-suppose lots of algebraic geometry and category theory.

One resource[1] says $\mathrm{Bun}(G)$ is the **moduli stack of G-bundles** where G is an affine algebraic group over a field k.

- the embedding $G \to GL_n$ induces a morphism of stacks $\mathrm{Bun}_G \to \mathrm{Bun}_{GL_n}$
- Bun_G is depends on the space X, $\mathrm{Bun}_G(X)$ is a groupoid
- Bun_G is a functor, meaning that it is well behaved under maps of spaces. A map $Y \to X$ yields another "induced" map:

$$\mathrm{Bun}_G(X) \to \mathrm{Bun}_G(Y)$$

I'm concluding it's simply not time yet.

[1] https://web.stanford.edu/ ebwarner/uniformizationofBunG.pdf