

PORTFOLiO

JASPER GULLIVER

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ABOUT

I'm an artist first, and most of my products start as drawings. I also build their production CAD, and when the factory sends back its mold layout, I'm the one negotiating where the gates and ejector pins go. These pages are six years of robots and toys made that way.

SCAD · BFA, INDUSTRIAL DESIGN · 2019

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SKILLS

CONCEPT
Sketching and illustration, form development, ZBrush sculpting

CAD
SolidWorks: Class A surfacing, top-down assemblies. Fusion 360

RENDERING
KeyShot, with materials built from scratch. Photoshop, Illustrator

PRODUCTION
DFM, design for assembly, CMF, injection molding and overmolding

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Every drawing in this portfolio is mine, as are the renders marked "Render: Jasper Gulliver".

VEX AIR

VEX ROBOTICS · 2023 — 2024

Senior Designer; industrial design lead on the drone.

VEX's first drone had to carry a battery, two cameras, rangefinders, motion and obstacle sensors and a port for add-on modules, and still weigh under 250g so schools could fly it without FAA registration. It weighs 249g. My "Shrike" proposal was chosen from a pool of competing concepts. I designed every exterior part, sculpting the form in ZBrush and rebuilding it as production CAD with a 0.8 mm shell. the black center stripe, made to ally with the design laguage of Vex AIM (Pg5), had to be cut due to the added weight of the layer of paint





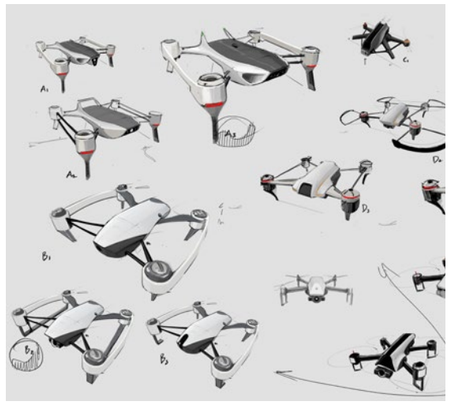
1g

UNDER THE FAA'S 250G REGISTRATION LIMIT, SO SCHOOLS NEVER HAVE TO REGISTER IT.

PICTURED:
1. THE SHIPPED PRODUCT (ABOVE)
2. CONCEPT, BEFORE FINAL MODELING

VEX AIR







PICTURED

Above: the shipped drone and its controller. Left: Shrike's first ZBrush mockup, rendered in KeyShot before the electronics were fitted inside & some earlier concept sketches. Right: one of the shipped modules in use, and a package kit. (images: VEX Robotics, except the mockup).

VEX AIM



VEX ROBOTICS · 2022 — 2023

Senior Designer. Took a fellow designer's winning concept to production.

A 2.5-inch-wide AI coding robot with 360 omnidrive, object recognition, self navigation, and does all while catching game pieces and kicking them away. It reached production in six months. I modeled its entire outer shell, and designed several key features, including status lights that shine through the shell and vanish when off, which cut a lens, a planned multi-part mold, and the complex tooling and assemblage that entailed.

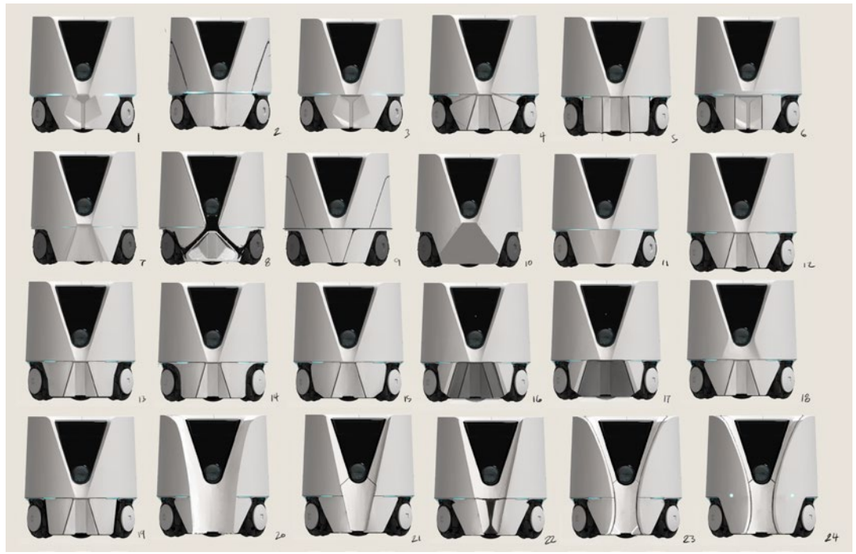
Status lights that shine through the shell, and vanish when off.



PICTURED

Top: the robot on its field among the game pieces. Right: with its status lights on, from three sides (images: VEX Robotics).

VEX AIM







Render: Jasper Gulliver



PICTURED

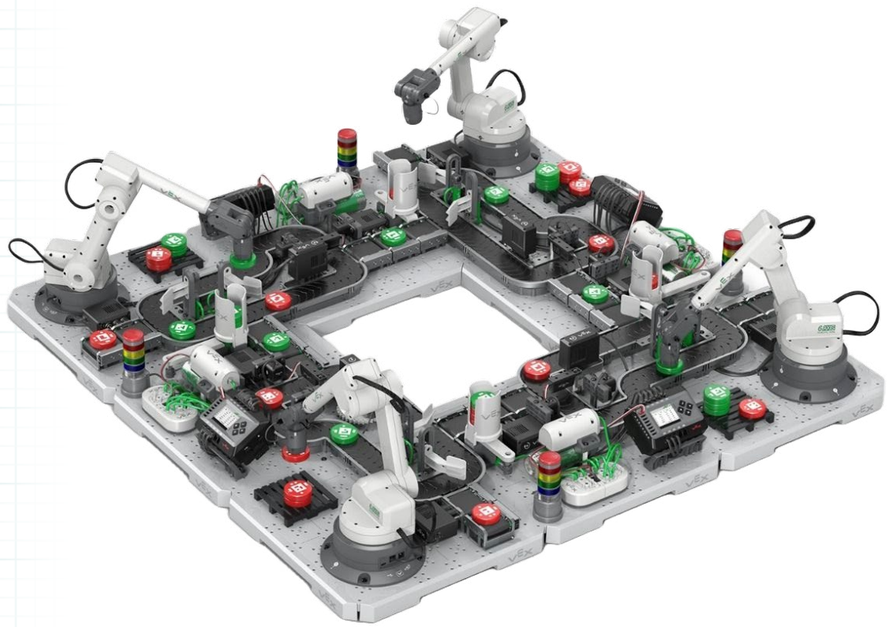
Top: front-variation drawings, and an early CAD concept rendered in KeyShot
Bottom: the shipped robot with its controller and game pieces, and the robot in use (photos: VEX Robotics).

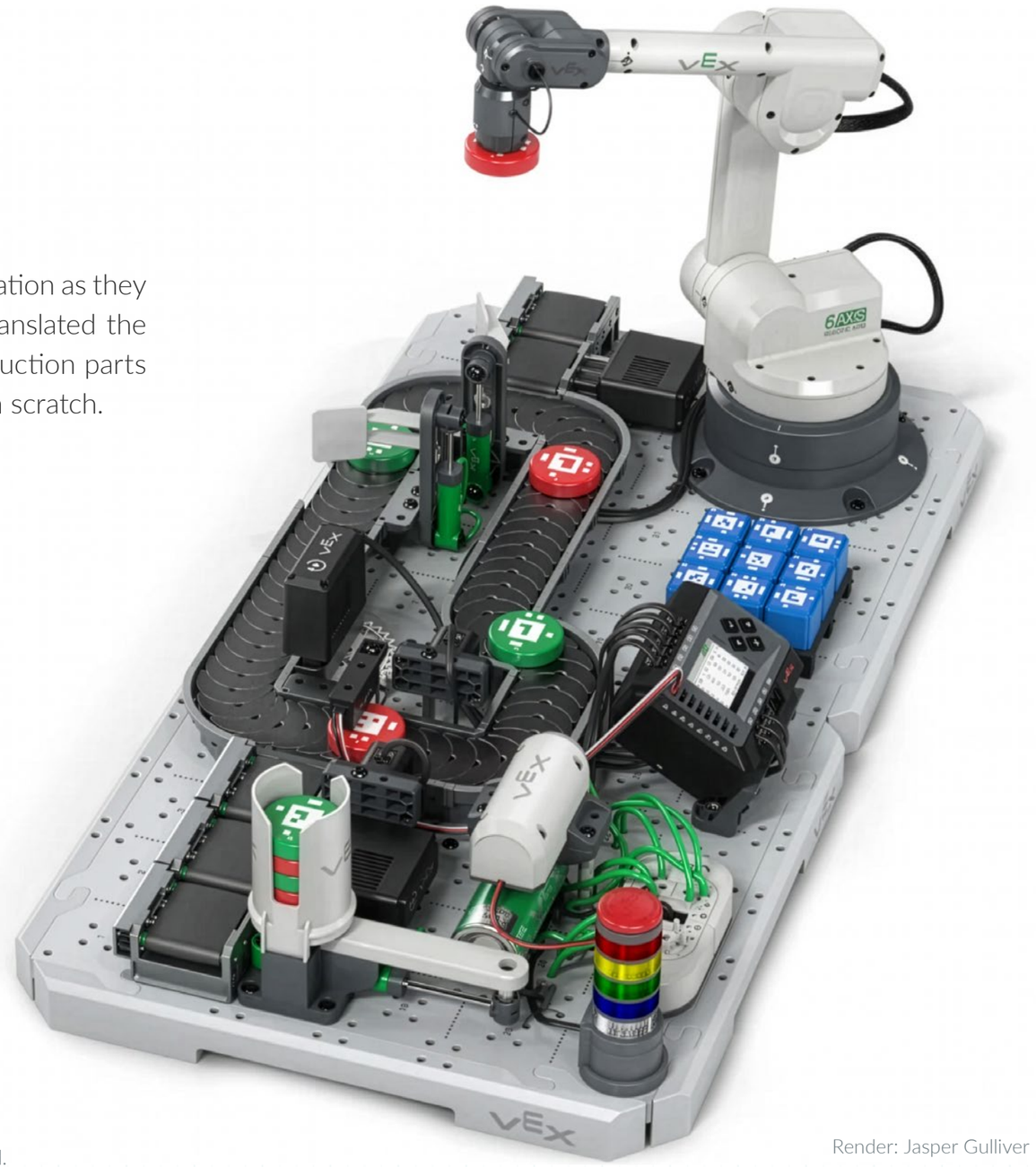
VEX CTE WORKCELL

VEX ROBOTICS · 2022 — 2023

Senior Designer.

A classroom kit that teaches high school and college students factory automation as they build and code a working cell. My part was the pneumatics housings: I translated the design manager's concept for the air tank, air pump and solenoid into production parts in six weeks or less. I also built every material and light for the renders from scratch. The housings shipped with the kit.





PICTURED

Left: four workcells linked in a loop (image: VEX Robotics). Right: one workcell, my render, which VEX published.

Render: Jasper Gulliver

HEXMODS STUNT CIRCUIT

An RC stunt truck, first in its line for Hexbug built from scratch in CAD. With four months to deliver and no time for a concept phase, the truck combines aspects of two reference trucks, checked with legal to avoid IP infringement. Its glossy clear coat shows any flaw in a reflection, so I shaped every surface to flow without a ripple and checked each one with zebra and curvature analysis.



Renders: Jasper Gulliver

HEXBUG · 2021 — 2022

Staff Designer. Working alone on a line once staffed by three designers, took the shell and 21 swappable parts to first article.

4 months

TO FIRST ARTICLE, WORKING ALONE



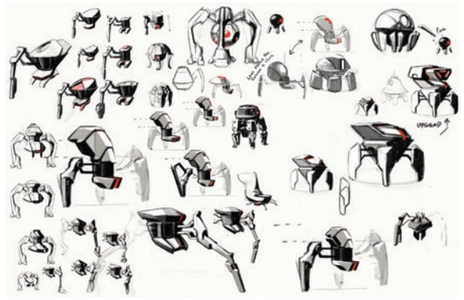


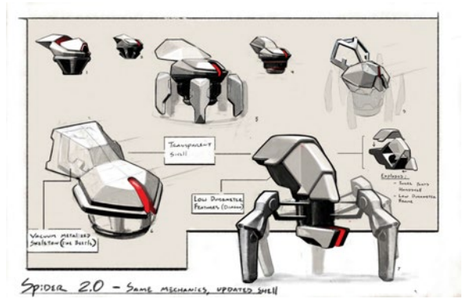
BLACK WIDOW

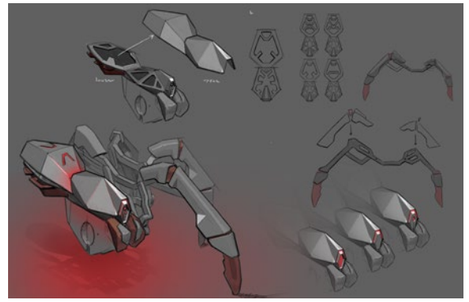
HEXBUG · 2020 — 2022

Staff Designer and sole designer.

An eight-legged RC crawler that walks on Strandbeest-derived linkages. I modeled the linkages, most of the shells, and the clearances the linkage sweep needed around the gearbox and housings the mechanical engineer designed. I sculpted the legs in ZBrush. They reverse a standard overmold: rubber floods in to join translucent ABS armor as knee and foot, so every parting line shows and had to mold without flash.









Render: Jasper Gulliver



PICTURED

Thumbnails, a concept plate and a full-body study, then the finished design rendered in KeyShot and the shipped toy in its box (image: HEXBUG).

THANK YOU

A full portfolio, with process, is available on request.



VIEW A · SHRIKE, CONCEPT

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