

HSP M 393

INNOVATION WITH CHOCOLATE

Final Project
Session 2 Fall 2022

Title: My Badge Life

by CHEF TRENT WALRAVEN
empowered by CHEF YANN QUECKENSTEDT

AESHM

APPAREL, EVENTS, and HOSPITALITY MANAGEMENT

HSP M 393
INNOVATION WITH CHOCOLATE

Final Project
Session 2 Fall 2022

Title: My Badge Life

by CHEF TRENT WALRAVEN
empowered by CHEF YANN QUECKENSTEDT

TABLE OF CONTENT

Summary - Page 3
Inspiration & Creativity - Page 3
Innovation - Page 6
Techniques & Skills - Page 7
Stories - Page 8
Aesthetics - Page 9
Taste - Page 10
Sketches - Page 11
Recipes - Page 13
Self-evaluation - Page 15

SUMMARY

TITLE: My Badge Life

by CHEF TRENT WALLRAVEN

I first got my interest in Cyber Security from listening to conference talks, and hearing about people hacking on their hardware to make it do what they want. I wanted to make something that encompasses a common idea among these conferences, since they were who I got into the field, and am still a part of to this day. This brought my mind to the badges from the conferences. A badge is often a little circuit board with some function that acts as the ticket into the conference, or is given away by a member of the conference as a prize for completing something like a challenge. This has become such a part of the cyber security community, collecting these badges has been given its own name, badgelifelife. For my project I was wanting to recreate the first badges that I got as a part of the community. There were specifically three badges that I am recreating. The first is the badge from DEFCON 29 which is from the time period where I got really into Cyber Security and it started feeling like it was the right community for me to be in. It is a badge with 4 raised computer keys on a trapezoid shaped badge. A badge from a Capture the Flag event put on by WatchGuard, which was the first badge that I won a prize for completing challenges, as it was something that I earned after gaining knowledge in the field. This badge is shaped like a panda, with accent pieces like eyes, and intricate ear shapes. With the final badge being the DEFCON 30 badge which is the first time that I got to the conference. This badge is a small keyboard with alternating black and white keys. My idea for this one is to create the dark chocolate base, and glue on white chocolate black keys with the challenge being smooth and even keys from piping chocolate. These will be lined up, the largest being my latest (the panda), to my oldest being the smallest (Defcon 29), showing how I have gained confidence and skill as time has passed.

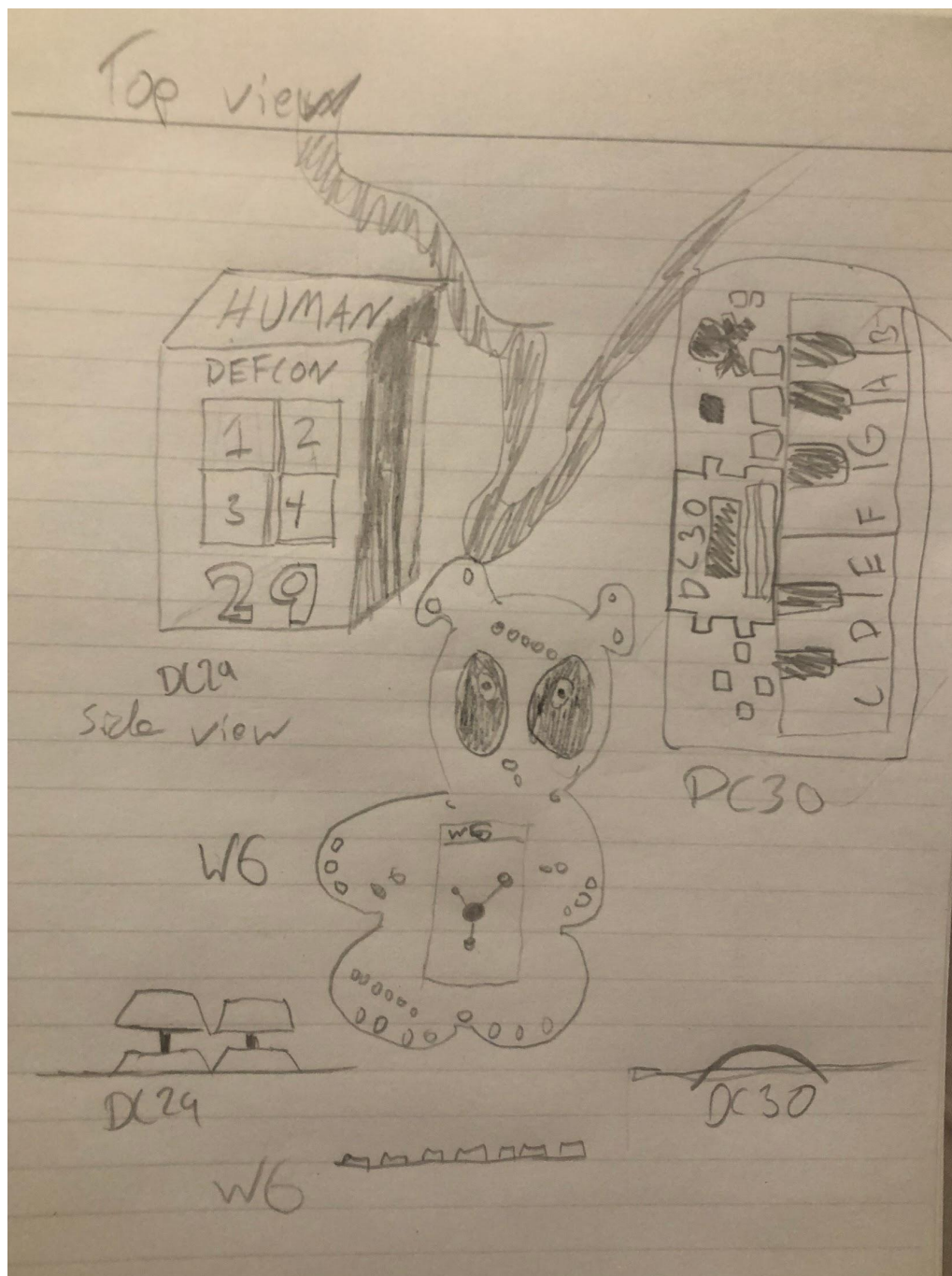
INSPIRATION & CREATIVITY

Brainstorm - When told the final project needed to be an art piece made of chocolate. My mind immediately went to thinking about things that are hard for me to portray in other medias or mediums. It took some time, but I realized something I always struggle to articulate is how I got into Cyber Security and what the journey has been like as I am slowly gaining experience and becoming a professional in the field. I got an interest in Cyber Security by watching recorded talks from security related conferences, and recently started going to conferences on my own. At these conferences the "ticket" is typically a PCB of some sort called a badge. So I wanted to create a series of some of the first badges that I received, and make them out of chocolate.

Mood Board - Pictures of many Cyber Security Badges that I have either seen online, or seen as a part of going to conferences on my own.



First Sketches - This sketch shows the 3 badges that I am planning on creating, with the oldest being the Defcon 29 Badge with raised keycaps, and was the first conference where I felt at home, and knew Cyber Security was what I wanted to go into. The second will be the Defcon 30 badge, which is piano. This is the first conference I went to with friends in the field. The main and latest will be the panda badge which I won as part of a competition, showing how I have increased in skill over time.



INNOVATION

My project is innovative in the way it portrays growing in an area, but how the growth isn't exclusive. Including my learning in Cyber Security at Iowa State I have been branching out and learning more about many other topics including this class. It will help me bring new ideas into Cyber Security, potentially creating change in ways that have not been thought of before. For the actual innovations in chocolate part, I am trying to get extremely smooth white chocolate surfaces like on a printed circuit board. To do this, I am planning on creating white chocolate accents by piping then reversed onto a silicon mat. Waiting for them to cool, removing them from the mat. Creating a very smooth front face, and then gluing them to the face of the large dark chocolate pieces.

TECHNIQUES & SKILLS

All three of the badges will be made with a large piece of tempered dark chocolate. Starting out with a large sheet, then cut out each shape needed to create the final pieces.

Panda Badge

This is the largest piece, it will require tempering a significant amount of dark chocolate well, to be able to fit the whole thing without having to glue anything together. It will also require delicate cutting, since there are many intricate nooks in the curves, and the sharp edges of the ears.

Piano Badge

This badge is going to require piping white chocolate in a smooth and even manner onto a silicon mat, and gluing onto the dark chocolate base to get a smooth piano key like appearance on the white accents.

Defcon29 Badge

This piece has the challenge of suspending keycaps on a small rod. It will require small cutting, to get the small rods, and the edges. Then gluing these pieces together in a clean way that makes them have their flat tops be even.

STORY

I am a Junior Cyber Security Engineering Student here at Iowa State. I have a major passion for embedded penetration testing. In this career field, I will attack smart devices like cameras, and routers looking for vulnerabilities. By attacking these systems I will be able to find flaws in systems before a malicious attacker can, meaning they will be fixed prior to it being an issue. While my main interest in life is Cyber Security I have always had a passion for cooking. Food like Cyber Security is an impossibly large field, with it being impossible to know how to do everything. I think this vastness to always be able to learn something new is what has attracted me to both areas. I know I will never get bored because if there is something I get sick of, I can move somewhere else, and continue to try new things. That is one of the reasons I choose to do this class. I have never worked with chocolate in this context, and wanted to learn something new in this field.

AESTHETIC

Colors

For my project I choose to use the contrasting colors of dark and white chocolate. The dark chocolate being the main large pieces, and using piped white chocolate to create accents

Shapes and Lines

I have a variety of shapes in my project, from tight angles, and long curves on the panda, with sharp corners on the trapezoidal Defcon 39 badge, to rounded corners, on the Defcon 30 badge.

Elevation

The main piece that will have elevation will be the Defcon 29 badge. It will have raised keycaps that are raised on a single point to make them appear almost floating.

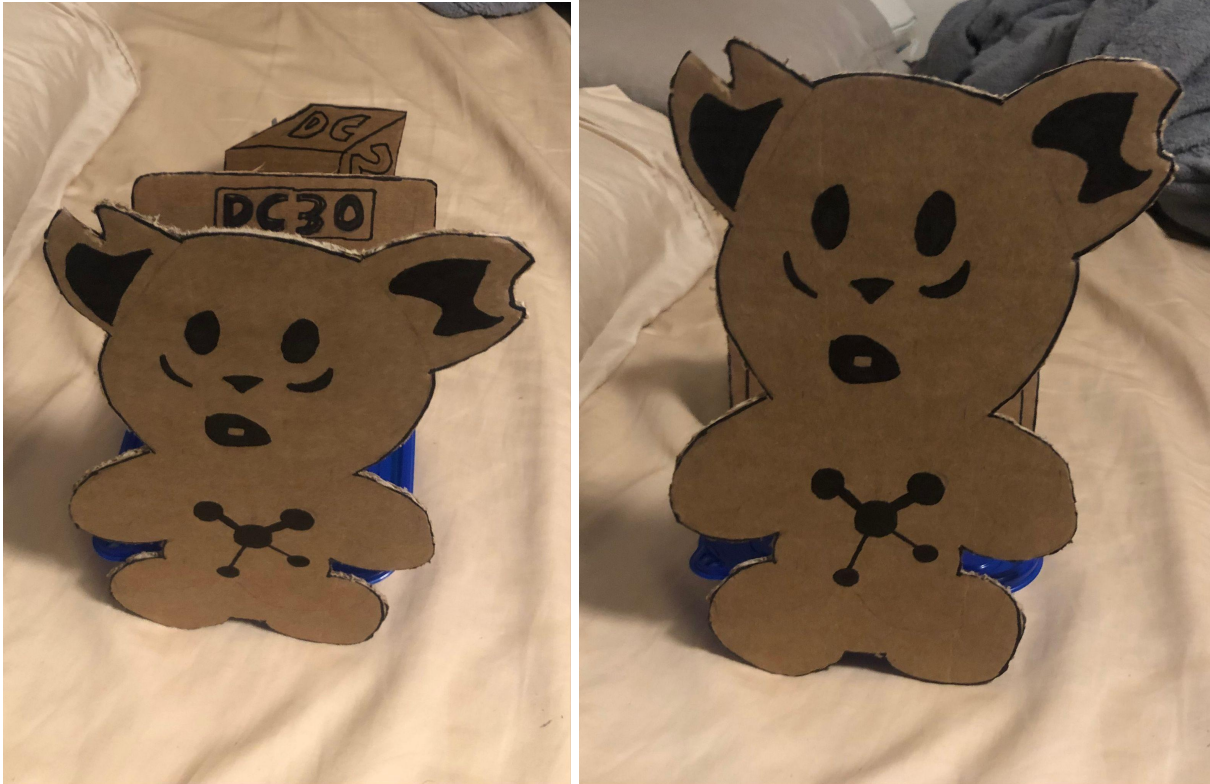
Perspective

These pieces are lined up with the newest, and biggest in the front, to the oldest and smallest in the back. This shows how I have learned as time has gone on and my knowledge has increased over time. This also shows how once I'm out in the real world, most people will not see my history, they will just see my current state. Just like viewing from the angle where you can not see the pieces behind the main panda. However if someone wants to look deeper they can see my history, and how I came to be in the field.

TASTE

For my tasting element I choose to make Chocolate Peanut Butter Truffles with a tempered chocolate exterior. I saw this recipe while looking for unique desserts that I could make, and the chocolate peanut butter combination stuck out to me. Looking at this recipe, it was something that I had never attempted before. With it requiring a combination of making a creamy truffle interior, with creating a tempered chocolate exterior, I thought it would be the perfect recipe to try something new, while still keeping a highly attainable goal. To add my own little flair, I decided to add crushed peanuts on the top of the truffle to add some extra crunch, and saltiness to go with the sweetness.

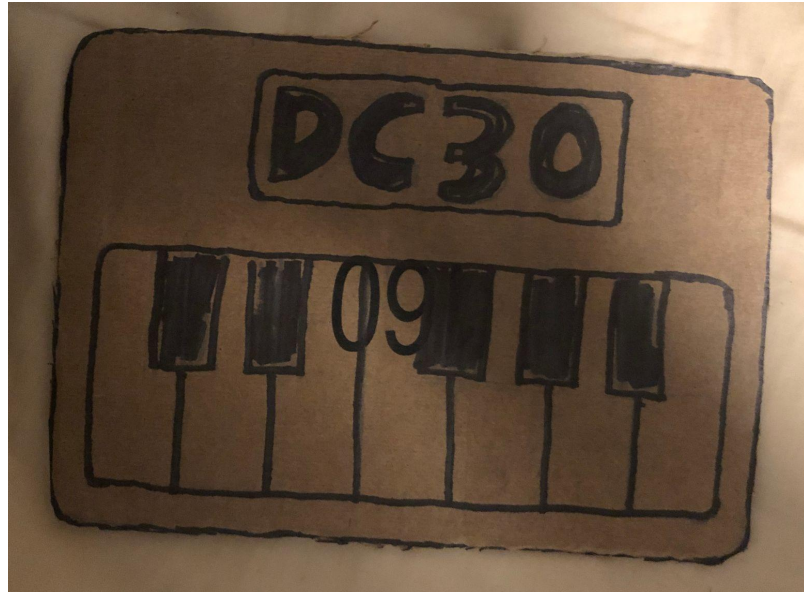
DESIGN & SKETCHES



These are the 3 templates I will be using to cut out the chocolate. All lined up how I will have them for the final display.



This is an image of the Defcon 29 badge with a raised keycap, showing slightly suspended above the surface with a small peg.



This is a picture of the other pair of badges that I made with the black being the white chocolate accents, while the cardboard is the main dark chocolate piece.

RECIPES & INGREDIENTS

For my recipe I used these Chocolate Peanut Butter Whiskey Truffles by Chef Tessa Arias. https://handletheheat.com/wprm_print/36545. Being under 21 however, I left out the whiskey part of the truffle, as it was not something I could get in preparation. I also slightly modified the exterior tempered chocolate coating to be similar to what we did in class for tempering to also gain practice for the class while preparing the dish.

Ingredients

Truffle Filling

227 grams semi-sweet chocolate chips finely chopped

28 grams unsalted butter

135 grams creamy peanut butter (using a brand that has an artificial emulsifier will result in a creamier center)

¼ cup heavy cream

Tempered Chocolate Coating

250 grams dark chocolate in small pieces

35 grams finely chopped dark chocolate

⅓ cup crushed peanuts

Tools

1 - Small ice cream scoop

2 - Large heatproof bowls

1 - Cooking scale

2 - Spatulas

1 - Large pot to heat water

1 - Non-stick surface (silicon mat for example)

Making the Truffle Centers

1. Place the semi-sweet chocolate, peanut butter, unsalted butter, and cream in a heatproof bowl.
2. Place the bowl over barely simmering water to melt the chocolate, stirring with spatula often to prevent scalding.
3. Continue stirring until mostly homogeneous
4. Remove bowl from heat, and place bowl into the refrigerator and allow to cool for a minimum of 2 hours
5. Remove from refrigerator, and scoop into small balls the ice cream scoop, smoothing out rough edges by rolling in your hands
6. Place on non-stick surface like a silicon mat on a baking sheet, and stick toothpick in the top of the ball
7. Return to fridge to allow to cool while tempering chocolate

Tempered Chocolate Exterior

1. Melt the 250 grams of chocolate in a heat proof bowl over water with a temperature between 110 °F and 120 °F
2. After the chocolate has fully melted, continue heating until it has reached a temperature of 110 °F. Once close to the temperature remove the truffle centers from the refrigerator.
3. After the chocolate has reached the temperature remove from heat, and mix in the chopped chocolate constantly stirring until reaching 90 °F
4. Once reaching 90 °F, working quickly to prevent seizing of the chocolate, coat truffles with the liquid chocolate. Rapidly after while the chocolate is still solidifying, sprinkle crushed peanuts on top and remove toothpicks.
5. Let sit at room temperature for chocolate to harden, then store in the refrigerator.

SELF-EVALUATION

Overall I think that the final project has been going well, I have learned how to temper and handle tempered chocolate to create intricate designs. I have also gotten more practice with piping, as it is something I constantly struggle with in my own cooking projects. After the first day of work, I thought that there was very little I would change with my project. It seemed like it was going to turn out very similar to how I imagined it. I think the only major change that I would make is creating a stencil to pour melted white chocolate into for the details. This could have allowed me to create more intricate details, and been less likely for clumsy piping skills to mess up. However, going through the second day, I faced more issues. I ended up being highly time constrained, as I underestimated how long the gluing together takes. This helped me learn I need to work on under pressure time management skills, so I am not sitting idle when under a time crunch. Another issue I faced was getting the white chocolate from the silicon mat where it had cooled, onto the chocolate piece. The thinness of white chocolate made it very prone to breaking before getting it glued onto the main piece. I think there are a few ways that I could fix this problem, the first is creating multiple copies of everything that I need to glue on so I have spares, or trying to make the backs of the piped white chocolate much flatter, as the most common breaking point were peaks created from the piping.

TITLE - My Badge Life

CHEF TRENT WALRAVEN - Majoring in Cyber Security Engineering

SUMMARY -

My project is a showing of how I have grown in the Cyber Security field, by recreating the badges at different stages of my journey in chocolate. Showing how I have grown over time, and how I can bring new ideas to the field as a whole.

TECHNIQUES

Technique 1 - Piping of liquid chocolate to make shapes, and glue pieces together.

Technique 2 - Tempering chocolate to make nice snappy cuttable chocolate

FLAVORS

I have a combination of dark chocolate and peanut butter in my truffle filling, with a tempered dark chocolate exterior, and crushed peanuts on top to add some saltiness in contrast to the sweetness.



HSPM 393 - INNOVATIONS WITH CHOCOLATE - CHEF YANN QUECKENSTEDT

AESHM - APPAREL, EVENTS, and HOSPITALITY MANAGEMENT