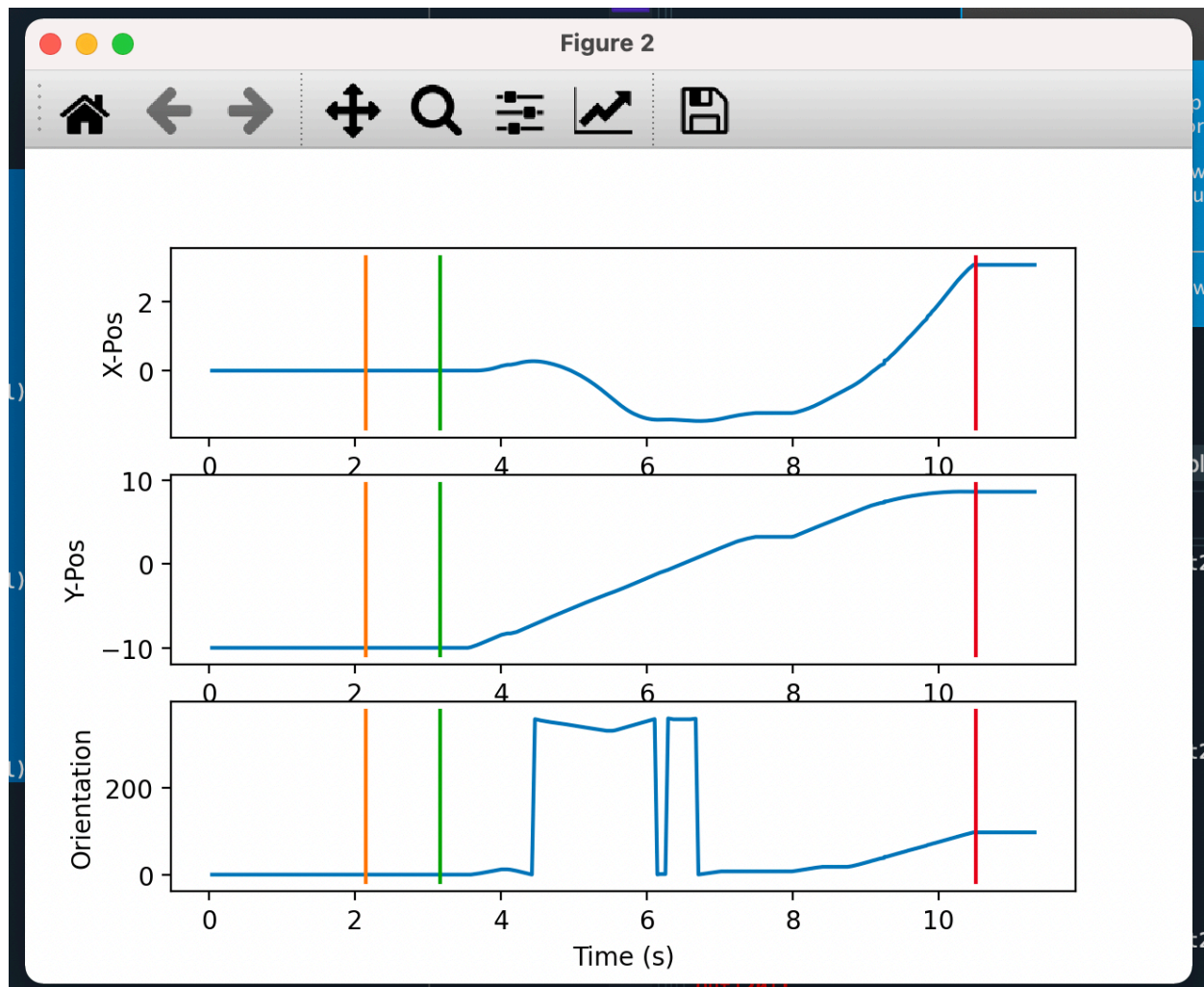


Part 2h



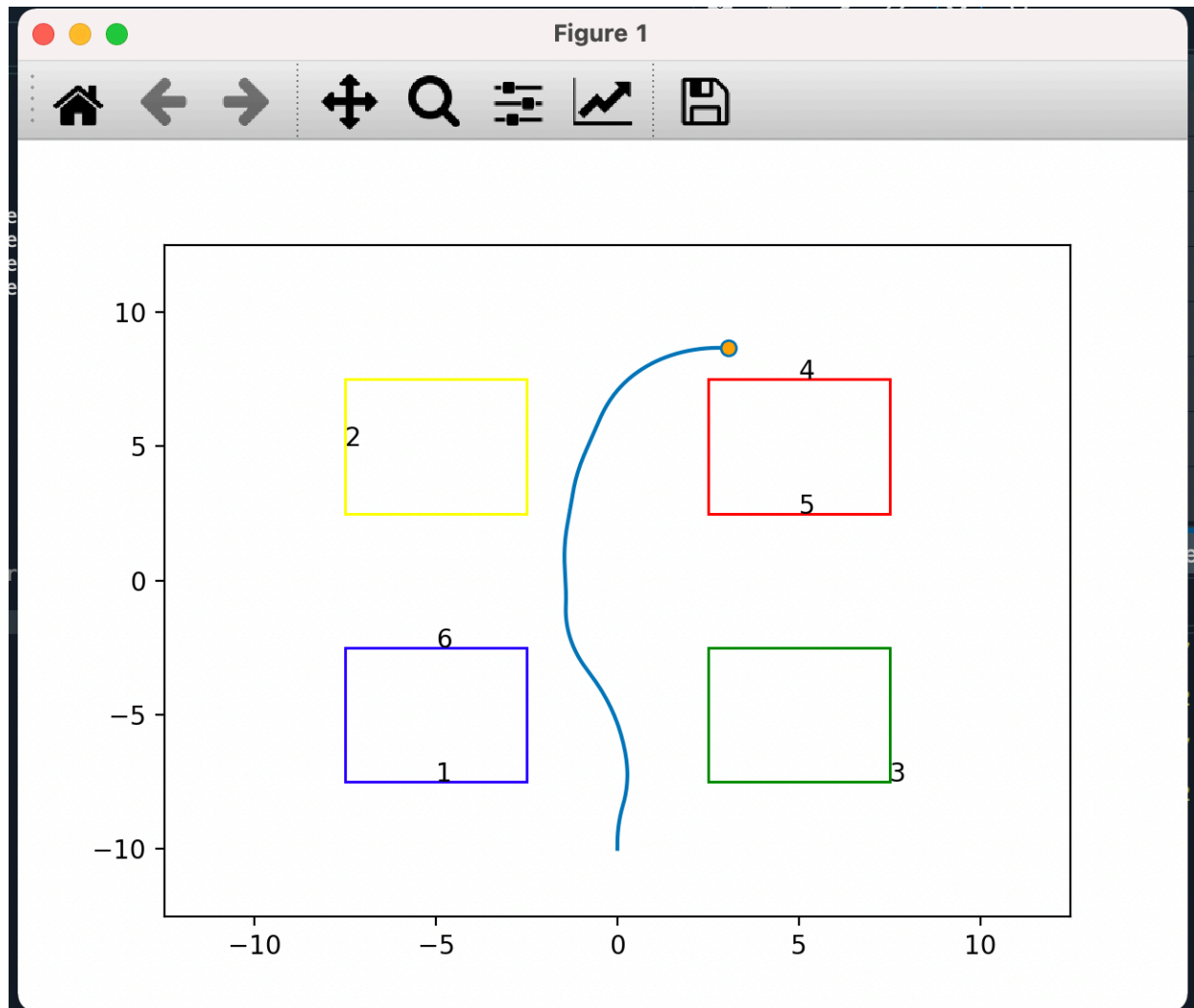
Part 2i

```
fig,ax = plt.subplots()
#boundaries of the maze
ax.set_xlim([-12.5,12.5])
ax.set_ylim([-12.5,12.5])
#pillars (center point) (width, height)
rect1 = mpatches.Rectangle((-7.5, 2.5), 5, 5, linewidth=1, edgecolor='Yellow', facecolor='none')
rect2 = mpatches.Rectangle(( 2.5, 2.5), 5, 5, linewidth=1, edgecolor='Red', facecolor='none')
rect3 = mpatches.Rectangle((-7.5, -7.5), 5, 5, linewidth=1, edgecolor='Blue', facecolor='none')
rect4 = mpatches.Rectangle(( 2.5, -7.5), 5, 5, linewidth=1, edgecolor='Green', facecolor='none')
ax.add_patch(rect1)
ax.add_patch(rect2)
```

```

ax.add_patch(rect3)
ax.add_patch(rect4)
#text in the plot text(x,y,s)
ax.text(-7.5,5,'2')
ax.text(5,7.5,'4')
ax.text(5,2.5,'5')
ax.text(-5,-2.5,'6')
ax.text(-5,-7.5,'1')
ax.text(7.5,-7.5,'3')
#plot marker & markevery[0, -1] mfc markerfacecolor, mec edgecolor
plt.plot(data[uind,2], data[uind,3], marker = 'o', markevery=[-1], mfc='orange')
plt.show()

```



Part 3n

```
fig, axs = plt.subplots(2)

#data
eind = np.arange(15000)
ex = samples['gx_left'][eind]
ey = samples['gy_left'][eind]
et = samples['time'][eind]

#data wrangling
ex[ex>1920] = np.nan
ex[ex<0] = np.nan
ey[ey>1920] = np.nan
ey[ey<0] = np.nan

#plot

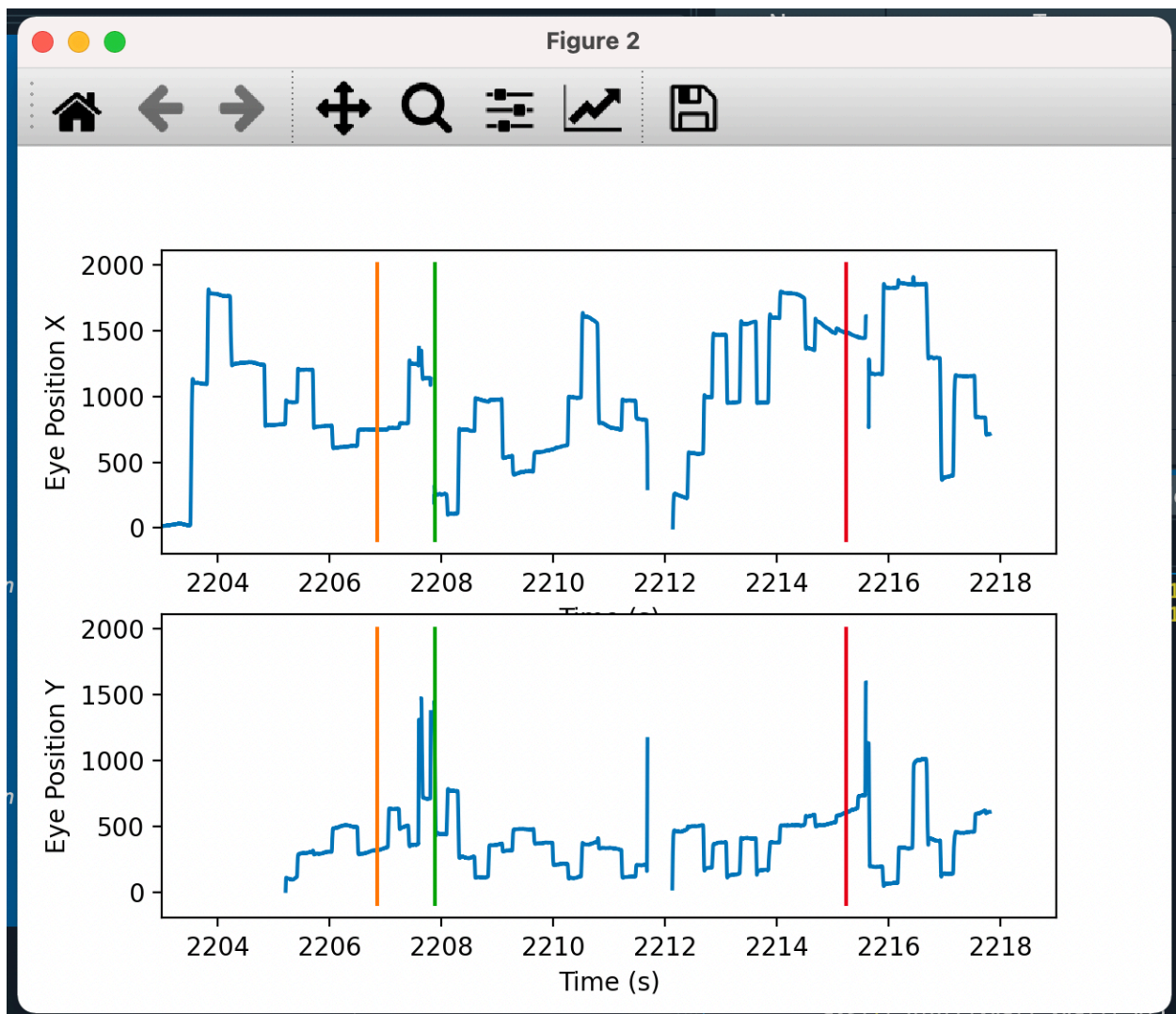
xval1 = messages['trialid_time'][1]
xval2 = messages['Cue_time'][1]
xval3 = messages['End_time'][1]
yl = plt.ylim(0,2000)

#plot ax1 ax2
axs[0].clear()
axs[0].plot(et,ex)
axs[0].set(xlabel='Time (s)', ylabel='Eye Position X')

axs[0].plot([xval1,xval1],yl)
axs[0].plot([xval2,xval2],yl)
axs[0].plot([xval3,xval3],yl)
axs[0].set_xlim(2203, 2219)

axs[1].clear()
axs[1].plot(et,ey)
axs[1].set(xlabel='Time (s)', ylabel='Eye Position Y')
axs[1].set_xlim(2203, 2219)

axs[1].plot([xval1,xval1],yl)
axs[1].plot([xval2,xval2],yl)
axs[1].plot([xval3,xval3],yl) #yl
```

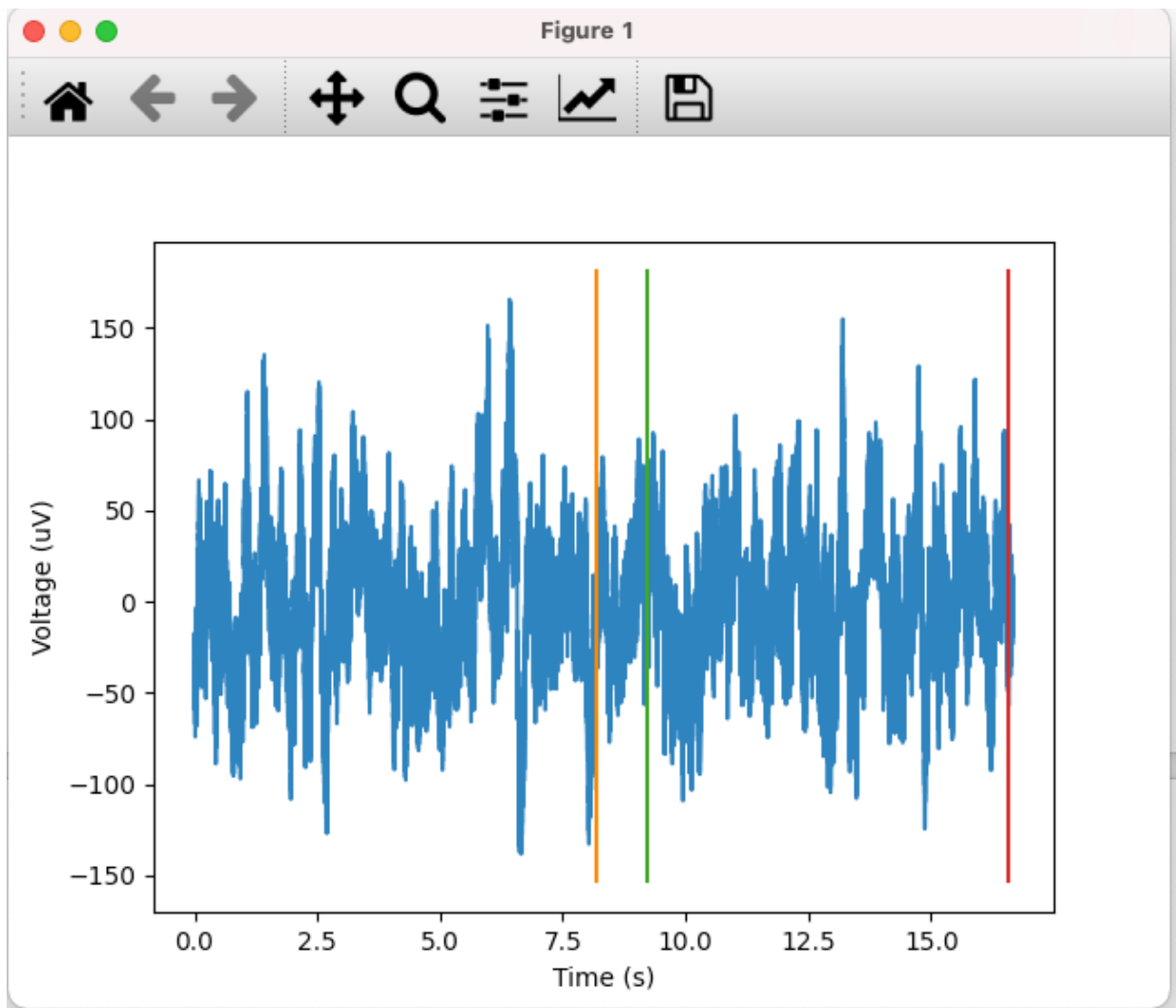


Part 4g

```
#data
broadband_data = data[0:500000]
broadband_data = np.squeeze(broadband_data) #y axis
time = [i/30000 for i in range(0,500000)] #x axis
rawtimes = ev_rawtimes/30000

plt.figure()
plt.plot(time, broadband_data)
plt.xlabel('Time (s)')
plt.ylabel('Voltage (uV)')

#markers
byl = plt.ylim()
mi2 = np.array(list(map(int, ev_markers[0:9]))).nonzero()
bt2 = rawtimes[mi2[0][1:4]]
bpt2 = np.kron(np.ones((2,1)),bt2)
bpy2 = np.kron(np.ones((np.size(bpt2,1),1)),byl).transpose()
plt.plot(bpt2,bpy2)
```



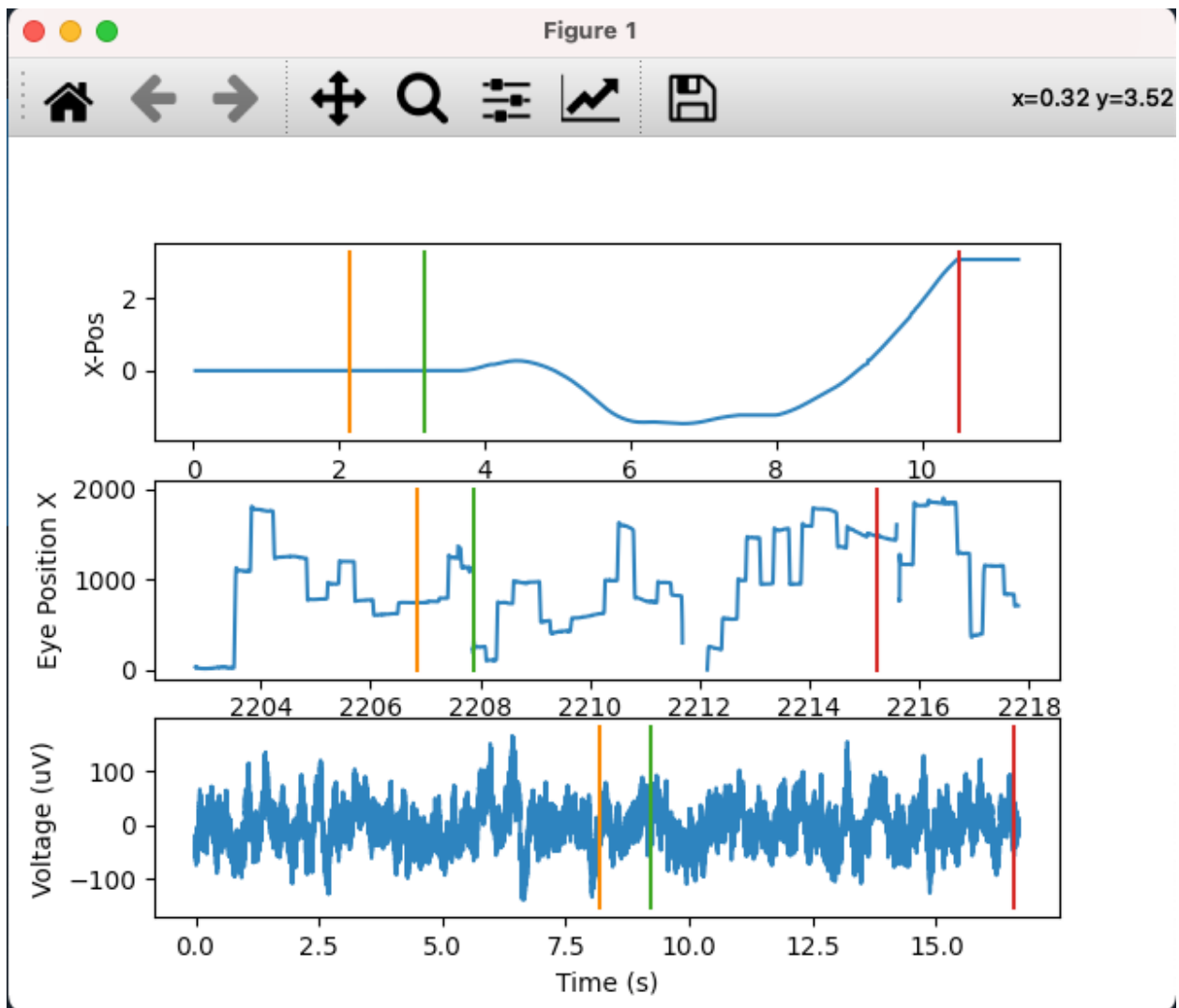
Part 5a

```
f, ax = plt.subplots(3,1)
```

```
ax[0].set_xlabel('Time (s)')
ax[0].set_ylabel('X-Pos')
ax[0].plot(ut,unity_data[uind,2])
ax[0].plot(pt2,py2)
```

```
ax[1].set_xlabel('Time (s)')
ax[1].set_ylabel('Eye Position X')
ax[1].plot(et,ex)
ax[1].plot([xval1,xval1],yl)
ax[1].plot([xval2,xval2],yl)
ax[1].plot([xval3,xval3],yl)
```

```
ax[2].set_xlabel('Time (s)')
ax[2].set_ylabel('Voltage (uV)')
ax[2].plot(time, broadband_data)
ax[2].plot(bpt2,bpy2)
```



Part 6

The screenshot shows the AWS Budgets console. At the top, there's a navigation bar with the AWS logo and a search bar. Below it, a left-hand menu lists various services like Home, Billing, Credits, etc. The main content area displays the 'Overview' page for a budget named 'EE3801'. A green banner at the top of the main area states 'Your budget EE3801 has been created successfully.' Below this, there's a table titled 'Budgets (1)' showing the details of the budget. The table has columns for Name, Thresholds, Budget, Amount used, Forecasted amount, Current vs. budgeted, and Forecasted vs. budgeted. The budget 'EE3801' is listed with a threshold of 'OK' and a budget amount of '\$400.00'. The 'Current vs. budgeted' column shows '0.00%'.

| Name | Thresholds | Budget | Amount used | Forecasted amount | Current vs. budgeted | Forecasted vs. budgeted |
|--------|------------|----------|-------------|-------------------|----------------------|-------------------------|
| EE3801 | OK | \$400.00 | - | - | 0.00% | - |

EC2 Dashboard

The screenshot shows the AWS Management Console's EC2 Dashboard. The left-hand menu lists various services like EC2 Dashboard, EC2 Global View, Events, Tags, Limits, etc. The main content area displays the 'Resources' section, which shows a summary of EC2 resources in the Asia Pacific (Singapore) Region. The summary includes: Instances (running) 0, Dedicated Hosts 0, Elastic IPs 0, Instances 0, Key pairs 1, Load balancers 0, Placement groups 0, Security groups 4, Snapshots 2, and Volumes 0. Below this, there's a 'Launch instance' section with a 'Launch instance' button and a 'Migrate a server' button. To the right of the 'Launch instance' section, there's a 'Service health' section showing the status of the EC2 service in the Asia Pacific (Singapore) Region as 'This service is operating normally'. Below the 'Service health' section, there's a 'Zones' section showing a list of zones with their names and IDs. To the right of the 'Zones' section, there's an 'Account attributes' section showing supported platforms, VPC, and other account information. Below the 'Account attributes' section, there's an 'Explore AWS' section with links to various AWS services and features.

| Resource | Count |
|---------------------|-------|
| Instances (running) | 0 |
| Dedicated Hosts | 0 |
| Elastic IPs | 0 |
| Instances | 0 |
| Key pairs | 1 |
| Load balancers | 0 |
| Placement groups | 0 |
| Security groups | 4 |
| Snapshots | 2 |
| Volumes | 0 |

Elastic Compute Clouds-charges

| | | |
|----------------------|---|--------------------|
| Home | Bills | ? |
| Billing | Date: October 2021 | Download CSV Print |
| Bills | | |
| Payments | Estimated Total | \$0.00 |
| Credits | Credits | |
| Purchase orders | ▼ Credits | |
| Cost & Usage Reports | Elastic Compute Cloud, Route 53 - Note: \$24.97 of credits have been applied across products on your bill | |
| Cost Categories | Your invoiced total will be displayed once an invoice is issued. | |
| Cost allocation tags | | |
| Cost Management | | + Expand All |
| Cost Explorer | Details | |
| Budgets | AWS Service Charges | \$0.00 |
| Budgets Reports | ► CloudWatch | \$0.00 |
| Savings Plans | ► Data Transfer | \$0.00 |
| Preferences | ► DynamoDB | \$0.00 |
| Billing preferences | ► Elastic Compute Cloud | \$0.00 |
| Payment methods | ► Key Management Service | \$0.00 |
| Consolidated billing | ► Lambda | \$0.00 |
| Tax settings | ► Route 53 | \$0.00 |
| | ► Simple Notification Service | \$0.00 |
| | ► Simple Queue Service | \$0.00 |
| | ► Simple Storage Service | \$0.00 |

Usage and recurring charges for this statement period will be charged on your next billing date. Estimated charges shown on this page, or shown on any notifications that we send to you, may differ from your actual charges for this statement period. This is because estimated charges presented on this page do not include usage charges accrued during this statement period after the date you view this page. **Reminder:** Information about estimated charges sent to you in a notification do not include usage charges accrued during this statement period after the date you view the notification. One-time fees and subscription charges are accounted separately from usage and

AWS Credits

| | | |
|----------------------|---|----------------------------------|
| Home | AWS Billing > Credits | ? |
| Billing | Credits | Redeem credit |
| Bills | Info | |
| Payments | Wednesday, October 13, 2021 at 9:51:03 PM GMT+8 | |
| Credits | Credits Last 6 months of inactive credits | |
| Purchase orders | Summary | |
| Cost & Usage Reports | Total amount remaining | Total amount used |
| Cost Categories | \$400.00 | \$0.00 |
| Cost allocation tags | | Active credits |
| Cost Management | | 1 |
| Cost Explorer | Credits | |
| Budgets | Find a credit | < 1 > ⌕ |
| Budgets Reports | Expiration date | Credit name |
| Savings Plans | Amount used | Amount remaining |
| Preferences | Applicable products | |
| Billing preferences | 07/31/2023 | National University of Singapore |
| Payment methods | | \$0.00 |
| Consolidated billing | | \$400.00 |
| Tax settings | | See complete list of services |