

# Time Series SSL

## Generative-based Methods

### Autoregressive-based forecasting

THOC[51], STraTS[53], GDN[54], SSTSC[55]

### Autoencoder-based reconstruction

TimeNet[58], PT-LSTM-SAE[59], Autowarp[57], RANSynCoders[60], DCTR[62], USAD[63], FuSAGNet[64], DAETI[66], DTCRAE[68], STEP[71], MVTSTrans[72], VSF[73], TARNet[74], LaST[84], InterFusion[77], OmniAnomaly[78], GRELEN[79], VGCRN[80], mTANs[81], HetVAE[82], P-VAE[83],

### Diffusion-based generation

NCSN[91], CSDI[95], TimeGrad[96], D<sup>3</sup>VAE[97], DiffSTG[100]

## Contrastive-based Methods

### Sampling contrast

USRL[101], TNC[102], NCL[104]

### Prediction contrast

CPC[22], LNT[105], TRL-CPC[106], TS-CP<sup>2</sup>[107], Skip-CPC[108], CMLF[110], TSTCC[111], CA-TCC[112]

### Augmentation contrast

TS2Vec[113], CoST[117], BTSF[118], TF-C[119], TimeCLR[121], CLOCS[122], CLUDA[123], MTFCC[124], MRLF[125], CMLF[110], SSLAPP[126], Dcdetector[120], TSTCC[111], CA-TCC[112]

### Prototype contrast

ShapeNet[130], TapNet[131], VSML[132], MHCCL[133]

### Expert knowledge contrast

SSP-TSC[136], ExpCLR[137], SleepPriorCL[138]

## Adversarial-based Methods

### Generation and imputation

C-RNN-GAN[145], TimeGAN[146], TTS-GAN[147], E<sup>2</sup>GAN[148], COSCI-GAN[149], PSA-GAN[150], GT-GAN[151], GRUI[152], SSGAN[153]

### Auxiliary representation enhancement

UASD[63], AnomalyTrans[154], DUBCNs[155], CRLI[156], AST[157], ACT[158], BeatGAN[159], Activity2vec[160]